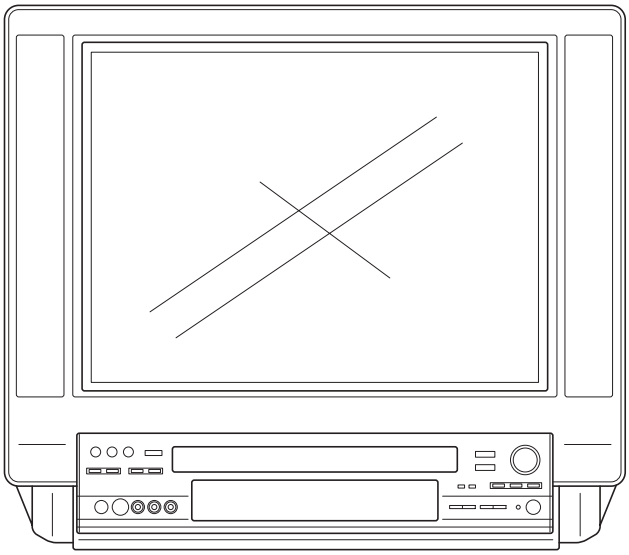
aiwa SERVICE

VX-F20DV1 U



SERVICE MANUAL

DVD COLOR TELEVISION

BASIC DVD MECHANISM : AZG-D ZDADM

- This Service Manual is the “Revision Publishing” and replaces “Simple Manual” (S/M Code No. 09-008-437-0T1).
- If requiring information about DVD mechanism, see Service Manual of AZG-D, (S/M Code No. 09-00A-350-6N4)

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S/M Code No. 09-009-437-0R1

REVISION DATA

TABLE OF CONTENT

SPECIFICATIONS 3
ACCESSORIES / PACKAGE LIST 3
PROTECTION OF EYES FROM LASER BEAM DURING SERVICING 4
NOTICES BEFORE REPAIRING 5, 6
DISASSEMBLY INSTRUCTIONS ..... 7 ~ 20
SERVICE POSITION 21
WIRE ARRANGEMENT ..... 22 ~ 27
ELECTRICAL MAIN PARTS LIST ..... 28 ~ 34
TRANSISTOR ILLUSTRATION 35
WIRING – 1 (MAIN) 36
SCHEMATIC DIAGRAM – 1 (MAIN) 37
WIRING – 2 (AUDIO) 38
SCHEMATIC DIAGRAM – 2 (AUDIO) 39
WIRING – 3 (NK) 40
SCHEMATIC DIAGRAM – 3 (NK) 41
WIRING – 4 (S-JACK) 42
SCHEMATIC DIAGRAM – 4 (S-JACK) 43
WIRING – 5 (JOINT) 44
SCHEMATIC DIAGRAM – 5 (JOINT) 45
WIRING – 6 (SYSTEM) 46
SCHEMATIC DIAGRAM – 6 (SYSTEM) 47
WIRING – 7 (FR-JACK) 48
SCHEMATIC DIAGRAM – 7 (FR-JACK) 49
WIRING – 8 (FR-KEY) 50
SCHEMATIC DIAGRAM – 8 (FR-KEY) 51
WIRING – 9 (OPT) 52
SCHEMATIC DIAGRAM – 9 (OPT) 53
WIRING – 10 (PS-2) 54
SCHEMATIC DIAGRAM –10 (PS-2) 55
WIRING – 11 (PS-SW) 56
SCHEMATIC DIAGRAM –11 (PS-SW) 57
WIRING – 12 (FR-FL) 58
SCHEMATIC DIAGRAM –12 (FR-FL) 59
IC BLOCK DIAGRAM ..... 60 ~ 61
FL (10-BT-207GK) GRID ASSIGNMENT AND ANODE CONNECTION ..... 62 ~ 63
IC DESCRIPTION ..... 64 ~ 67
VOLTAGE CHART ..... 68 ~ 75
WAVEFORM ..... 76 ~ 81
ELECTRICAL ADJUSTMENT ..... 82 ~ 96
ON THE DEFAULT MODE WHEN SHIPPED FROM THE FACTORY 97
DVD TEST MODE 98
MECHANICAL EXPLODED VIEW 1 / 1 99
MECHANICAL PARTS LIST 1 / 1 100

SPECIFICATIONS

TV SECTION

Tuner System	Frequency synthesized tuner
TV System	NTSC-M
Channel Coverage	VHF: 2 to 13 UHF: 14 to 69 CATV: 5A, A-1 to A-5, A to W, W+1 to W+84
Program Memory	181
Antenna Input	75 ohms, unbalanced
Picture Tube	20 in.
Screen Size	406 (W) x 305 (H) mm (16 x 12 1/8 in.) 508 mm (diagonal) (20 in.)
Video Input	1 Vp-p, 75 ohms
Audio Input	0.5 Vrms., more than 33 k ohms
Video output	1 Vp-p, 75 ohms (sync negative)
Audio output	0.5 Vrms., 2.2 k ohms
Digital Audio output	Optical
Speaker	160 x 40 mm (6 3/8 x 1 5/8 in.)

DISC PLAYER SECTION

Laser	Semiconductor laser (λ =650 /780 nm)
D/A converter	1 bit dual
Signal format	NTSC
Supported discs	DVD video discs 12 cm (single-sided single-layer, single-sided double-layer, double-sided single-layer, double-sided double layer) 8 cm (single-sided single-layer, single-sided double-layer, double-sided single-layer, double-sided double layer) Compact discs (CD-DA, video CD) 12 cm and 8 cm discs

GENERAL

Operating Voltage	120 V AC, 60 Hz
Power Consumption	125 W
Phones Jack	Stereo-mini jack
Operating Temperature	5 °C – 35 °C
Operating Humidity	35 % – 80 %
Dimensions	575 (W) x 504 (H) x 493(D) mm (22 3/4 x 19 7/8 x 19 1/2 in.)
Weight	30.0 kg (66 lbs.)

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- Manufactured under license from Dolby Laboratories Licensing Corporation.
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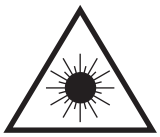
ACCESSORIES / PACKAGE LIST

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8A-JD1-670-010		RC UNIT,RC-AVC01
2	8A-JD1-901-010		IB,U (3L)
3	8A-JD1-904-010		IB,U QUICK (E/S/F)
4	87-B30-311-010		ADAPTOR,300 75 TSN-02

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!!
WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel: Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

VAROITUS!
Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saataa altistaa käyt-täjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

VARNING!
Om apparaten används på annat sätt än vad som specificeras i denna bruksanvising, kan användaren utsättas för osynling laserstrålning, som överskrider gränsen för laserklass 1.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herin may result in hazardous radiation exposure.

ATTENTION
L'utillisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL
Usynlig laserstråling ved åbning, når sikkerhedsafbrydereer ude af funktion. Undgå udsættelse for stråling.

This Compact Disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located on the rear exterior.

CLASS 1	LASER PRODUCT
KLASSE 1	LASER PRODUKT
LUOKAN 1	LASER LAITE
KLASS 1	LASER APPARAT

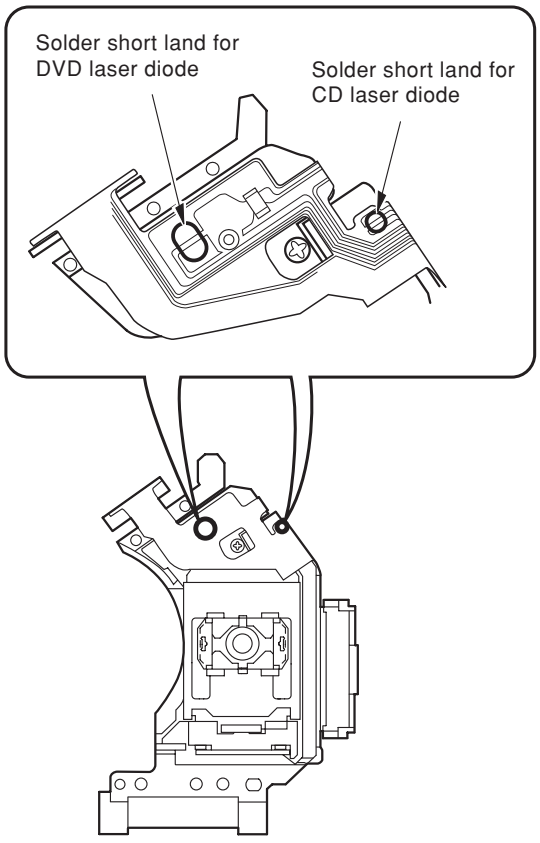
Precaution to replace Optical block

(SF – HD3AV)

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

1) After the connection, remove solder shown in the right figure.

PICKUP ASSY PWB



To make the best use of this equipment, make sure to obey the following items when repairing (or mending).

1. Do not damage or melt the tunicate of the leading wire on the AC1 side, including the power supply cord.
2. Do not soil or stain the letters on the spec. inscription plates, notice labels, fuse labels, etc.
3. When repairing the part extracted from the conducted side of the board pattern, fix it firmly with applying bond to the pattern and the part.
4. Restore the following items after repairing.
   1) Conditions of soldering of the wires (especially, the distance on the AC1 side).
   2) Conditions of wiring, bundling of wires, etc.
   3) Types of the wries.
   4) Attachment conditions of all types of the insulation.
5. After repairing, always measure the insulation resistance and perform the voltage-withstand test (See Fig-1).

1) The insulation resistance must be 3.5 to 6.0 MΩ when applying 500V per second.
2) In the voltage withstand test, apply 1.0 KV for 1 minute and check that the GO lamp lights.

* Breaking current set to 10 mA.
* Connect the safety checker as shown in Fig-1, then measure the resistance and perform the test.
* Do not touch the equipment during testing.
* For details of the safety checker, refer to the supplied Operation manual.

Insulation resistance: 3.5 to 6.0 MΩ (500 V/s)
Voltage-withstand: 1.0 KV for 1 minute

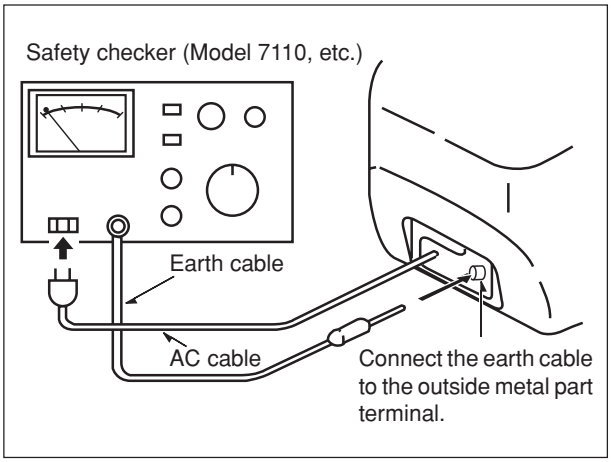


Fig-1

When servicing and checking on the TV, note the followings.

1. Keep the notices.
   As for the places which need special attentions, they are indicated with labels or seals on the cabinet, chassis and parts. Make sure to keep the indications and notices in the operation manual.
2. Avoid an electric shock.
   There is a high voltage part inside. Avoid an electric shock while the electric current is flowing.
3. Use the designated parts.
   The parts in this equipment have the specific characteristics of incombustibility and withstand voltage for safety.
   Therefore, use a part which has the same character as the replaced part. Especially as to the important parts for safety which is indicated in the circuit diagram or the table of parts with a ⚠ mark, the designated parts must be used.
4. Put parts and wires in the original position after assembling or wiring.
   There are parts which use the insulation material such as a tube or tape for safety, or which are assembled so that these parts do not make contact with the printed board. The inside wiring is designed not to get close to the pyrogenic parts and high voltage parts. Therefore, put these parts in the original positions.
5. Take care of the cathode-ray tube.
   By setting an explosion-proof cathode-ray tube in this equipment, safety is secured against implosion. However, when removing it or servicing from the back, it gives out shock that is dangerous. Take enough care to deal with it.
6. Avoid an X-ray.
   Safety is secured against an X-ray by giving considerations to the cathode-ray tube and the high voltage peripheral circuit, etc. Therefore, when repairing the high voltage peripheral circuit, use the designated parts and do not change the circuit. Repairing, except indicates, causes rising of high voltage, and the cathode-ray tube emits an X-ray.
7. Perform a safety check after servicing.
   Confirm that the screws, parts and wiring which were removed in order to service are put in the original positions, or whether there are deteriorated portions around the places serviced.

⚠ Safety Components Symbol

This symbol is given to important parts which serve to maintain the safety of the product, and which are made to confirm to special Safety Specifications.
Therefore, when replacing a component with this symbol make absolutely sure that you use a designated part.

When repairing the Flat TV, never switch ON the main POWER with the degauss coil removed.
If the degauss coil must inevitably removed due to some reason, connect a dummy using either Method 1 or Method 2 as described below.

Method 1: Prepare a replacement degauss coil and connect it during repair.

Method 2: Prepare a resistor of 2.8 ohm, 20 W. Manufacture a repair jig by connecting it to the degauss side connector. Connect the jig during repair.

Waning

If the main POWER is switched ON without connecting degauss coil or dummy resistor, the cement resistor R801 that is connected in parallel with the degauss coil burns to open.

DISASSEMBLY INSTRUCTIONS

1. "CABINET" REMOVAL

1-1. Remove the 9 screws (A), 2 screws (B) and 4 screws (C) from the rear of of the set and remove the "Cabi, Rear".

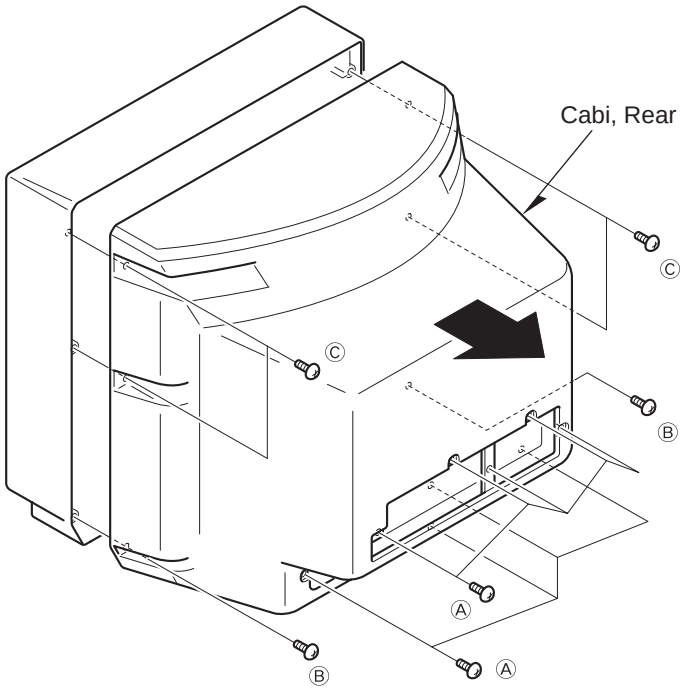


Fig-1

1-2. Remove 2 screws (D) and the screw (E) and remove the "Panel, Rear 2".

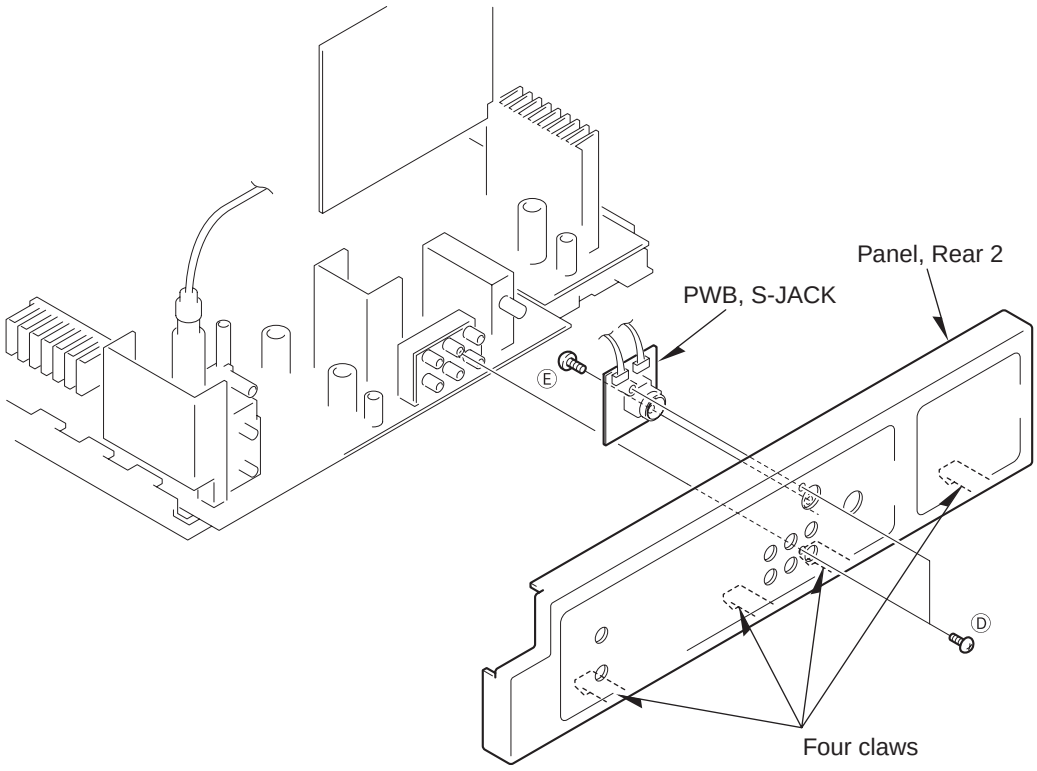


Fig-2

2. "TV. UNIT" REMOVAL

2-1. Anode cap disassembly

2-1-1. Notice Before Disassembly

Discharge the anode.

1) The cathode-ray tube of this equipment has the structure that the anode potential is automatically discharged when the power is off. But immediately after the POWER is turned off, there might be the case that the anode potential has not been discharged completely. When removing the Anode Cap, make sure to discharge the anode potential.

Do not use a plier.

2) When using a plier to catch or loose the hook, the spring is deteriorated depending on the gripping power of the plier. Therefore, do not use a plier because the hook may easily slip off from the CRT anode button and it will be cause of accidents.

Do not rotate the Anode cap.

3) Do not rotate the Anode Cap. If the Anode Cap is rotated, the hook may easily slip off.

2-1-2. Disassembly

Discharge the anode (See Fig-3).

1) Connect a flat-head screwdriver to the CRT GND using a cable with clips.
2) Confirm that the electric current is conducted using the tester at the tip of the screwdriver and the GND on the TV side.
3) Put the tip of the screwdriver to the shutter hook.

Note) Take care not to scratch the Anode Cap.

4) Turn over the Anode Cap (See Fig-4).

Note) Take care not to damage the Anode Cap.

5) While pushing the Anode Cap in the direction of arrow ① with the thumb as the left figure, lift it up in the direction of arrow ② and remove one side of the hook (See Fig-5).
6) After the side is removed from the Anode Button, turn over the edge of the Anode Cap, and pull it to remove in the direction of the arrow (See Fig-6).

Note) Do not remove the Anode Cap in the direction of 90° degrees (vertical).

Note) Do not pull it forcefully. Check that the hook has not changed the shape after removing.

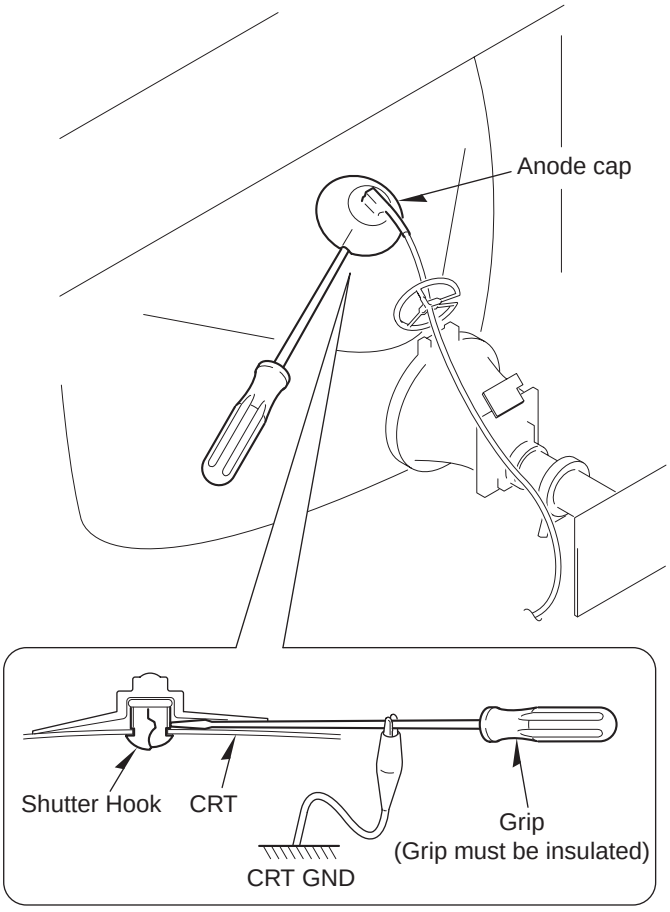


Fig-3

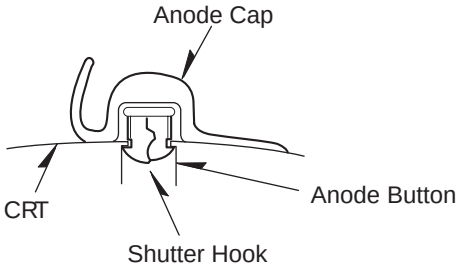


Fig-4

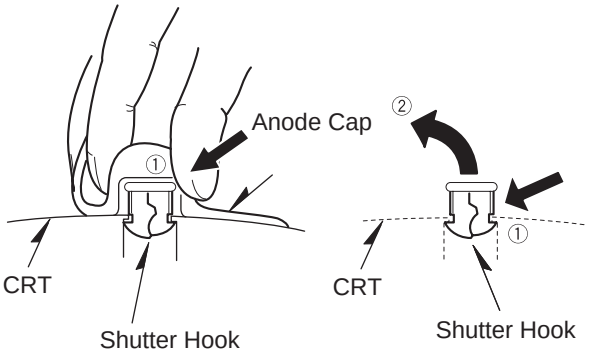


Fig-5

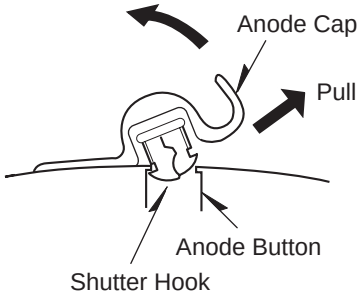


Fig-6

2-2. Anode cap assembly

Make sure to keep the notices not to make troubles when assembling or disassembling the Anode Cap.

2-2-1. Notice Before Assembly

Strictly forbidden to rotate Anode Cap after assembling.

Do not use a deformed hook.

1) If the Anode Cap is rotated after assembling, the Anode Cap may slip off. Route the high voltage cable before fixing the Anode Cap (See Fig-7).
2) If the Anode Cap is fixed before routing the high voltage cable by mistake, route the cable without rotating the Anode Cap at all.

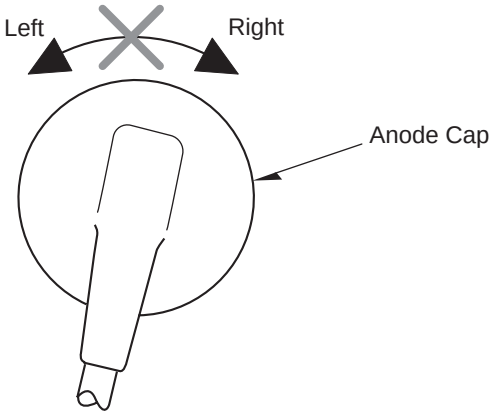


Fig-7

2-2-2. Anode Cap Assembly

1) Wipe the assembling position with a clean cloth moistened with a little alcohol (See Fig-8).

Note) Confirm that there is no dirt, dust, etc in the assembling position.

2) Apply a proper quantity of the designated silicon grease (use KS-650N) in the direction of circumference (See Fig-8).

Note) Take care that the silicon grease dose not get into the Anode button.

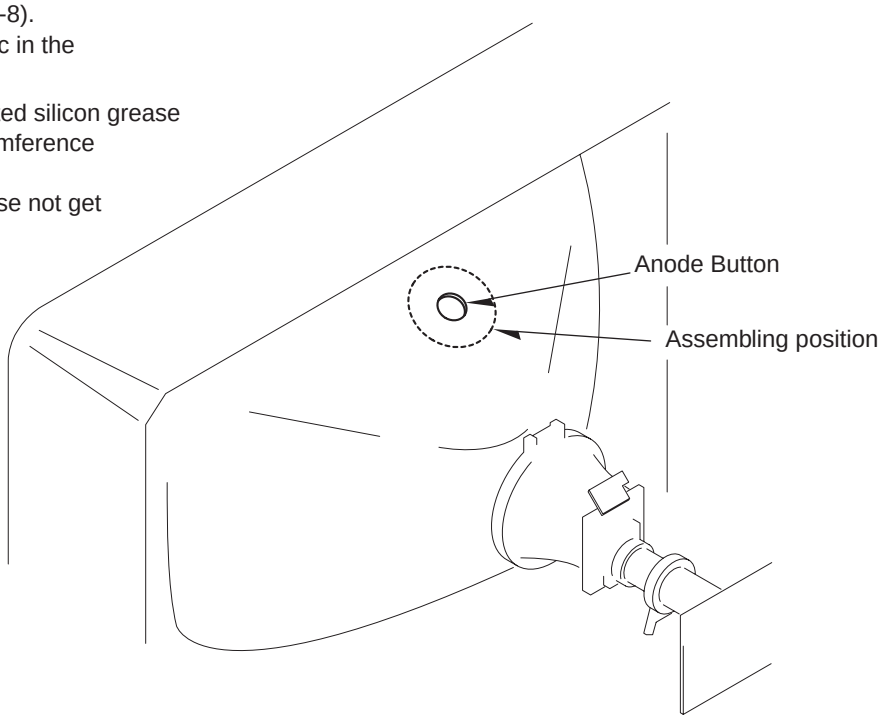


Fig-8

3) Straighten the high voltage cable and arrange the wire not to twist (See Fig-9).

Note) If the wire is not correctly arranged, the Anode Cap rotates and it causes a failure.

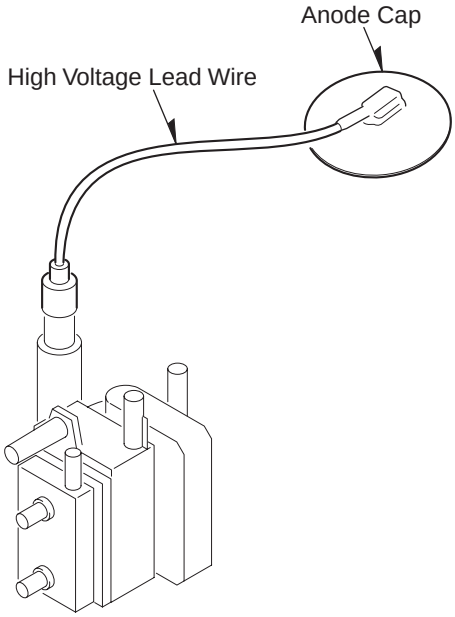


Fig-9

4) Turn over the edge of the Anode Cap as the left figure (See Fig-10).

Note) The right and left sides of the Anode Cap should be turned over equally.

Note) Take enough care not to scratch the Anobe Cap.

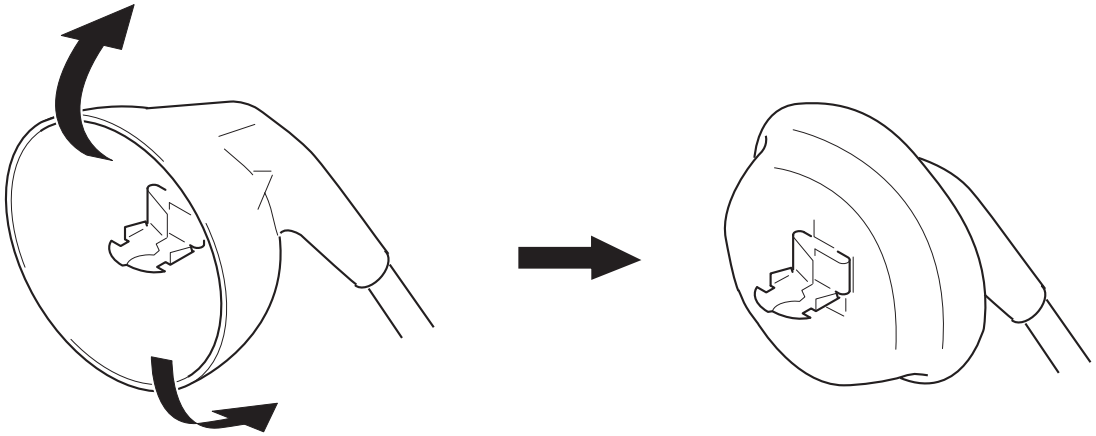


Fig-10

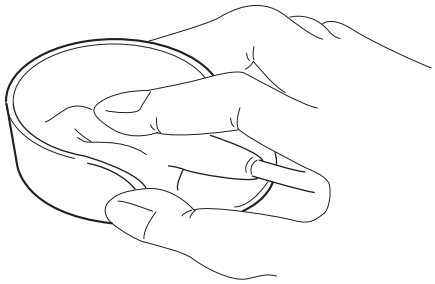


Fig-11-1

5) Hold the Anode Cap with the thumb and middle fingers while supporting the middle projection with the forefinger as the left figure. (See Fig-11-1)

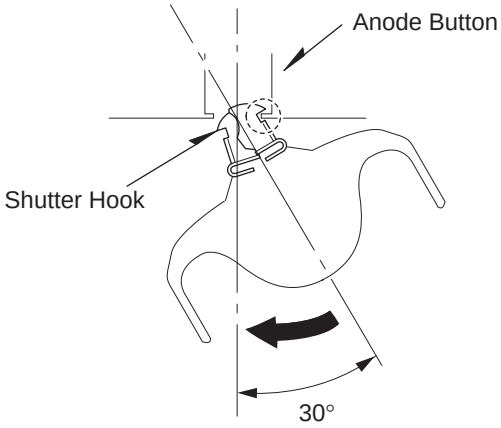
6) Insert the one side of the hook to the anode button. (See Fig-11-2)

Note) Confirm that the hook is surely hitched.

7) Hook the claw at the other end of the shutter hook on the anode button as Fig-11-3.

Note) Hook the claw at the other end in the manner of sliding into the Anode Button as shown.

Note) When the shutter hook is inserted into the Anode Button completely, the clicking sound can be heard.



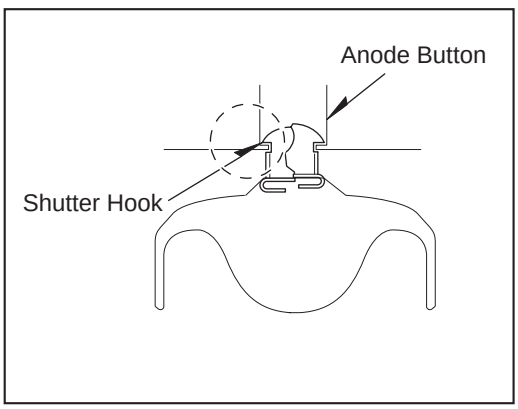


Fig-11-3

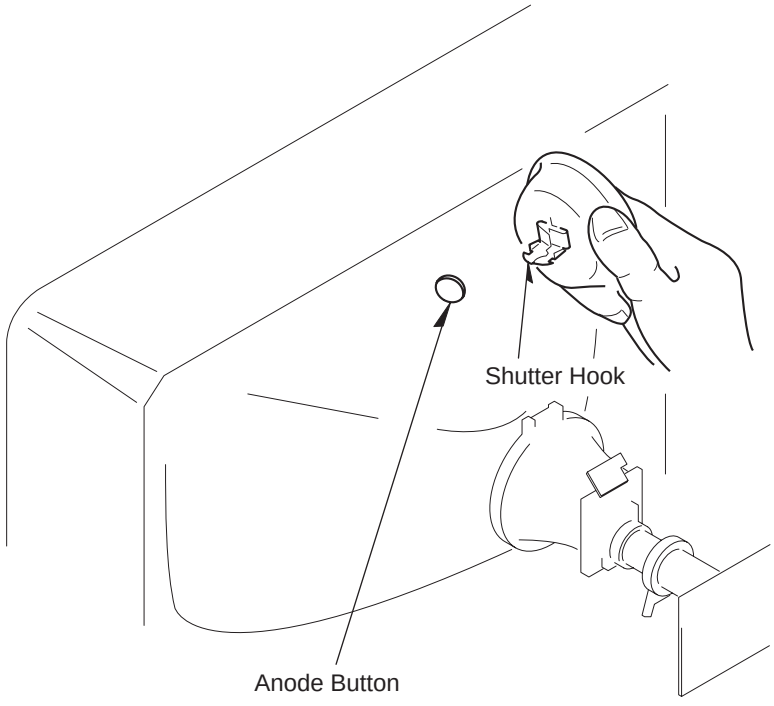


Fig-11-2

8) Pull it lightly while keeping the edge of the Anode Cap turned over. Visually confirm that the both hooks are inserted and check the condition of hitching of the shutter hook.
9) Remove hand from the rubber cap of the Anode Cap.

Note) Put on the edge of the Anode Cap without clearance.

10) Push the part of the skirt of the edge of the Anode Cap lightly and set the rubber cap and CRT to be adhered.
11) Furthermore, reconfirm that the Anode cap adheres closely to the CRT (See Fig-12).

* Refer to the "Wire Process method" for details of wire process.

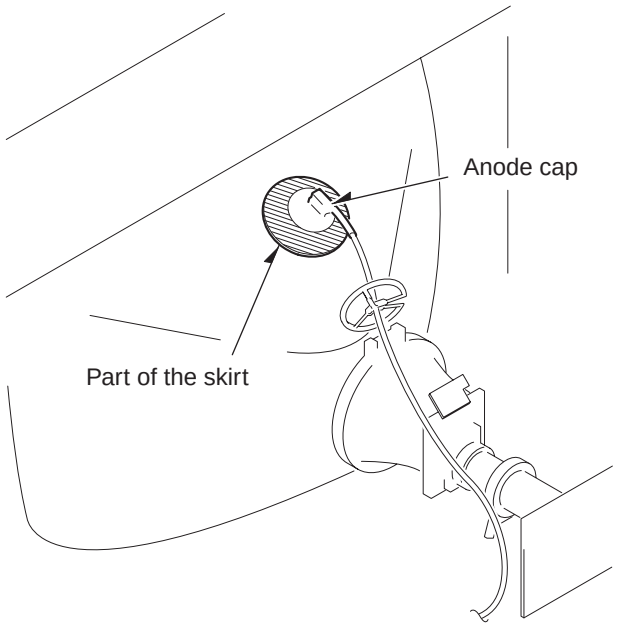


Fig-12

* When either FBT or anode cap is going to be replaced, be sure to replace both FBT and anode cap at the same time as follows. (Because the anode cap cannot be removed any more if it is locked into the connector-type FBT.)

1. Remove the rubber cap at the tip end of the anode cap assy.
2. Insert the terminal at the tip end of the high tension lead of the anode cap assy as far as it can go until you feel the clicking feeling.
3. Pull the anode cap assy gently upward (with 2 to 3 kg) in order to confirm that the connector is firmly connected. Then move it down again. (The reason of pulling gently is to confirm that the connector is firmly connected. If it is pulled too strongly, the connector can be broken.)
4. Press the rubber cap that is attached to the terminal side of the anode cap assy, down to the flange. Note that the rubber cap is not turned over. (See Fig-13.)
5. Remove the rubber cap of the focus wire.
6. Insert the top tip of the cable firmly and push down the rubber cap so that the rubber cap cover the terminal completely.
7. Insert the top tip of the screen wire firmly and secure it by attaching it to the groove. (See Fig-14)

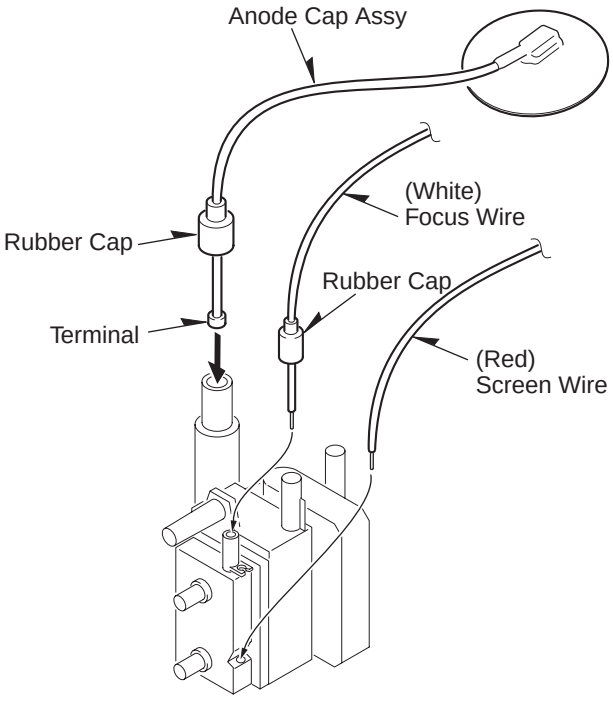


Fig-13

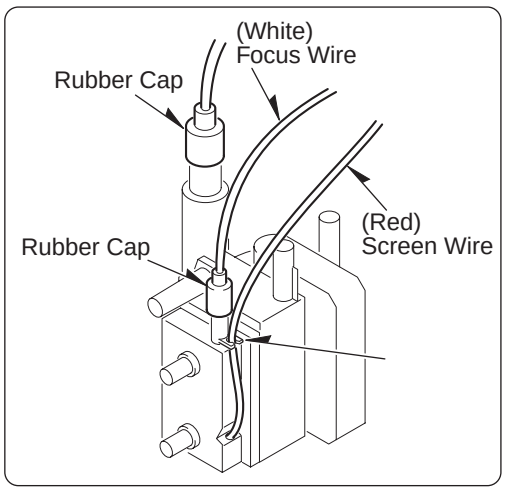


Fig-14

2-3. Remove the connectors from the "TV, UNIT".

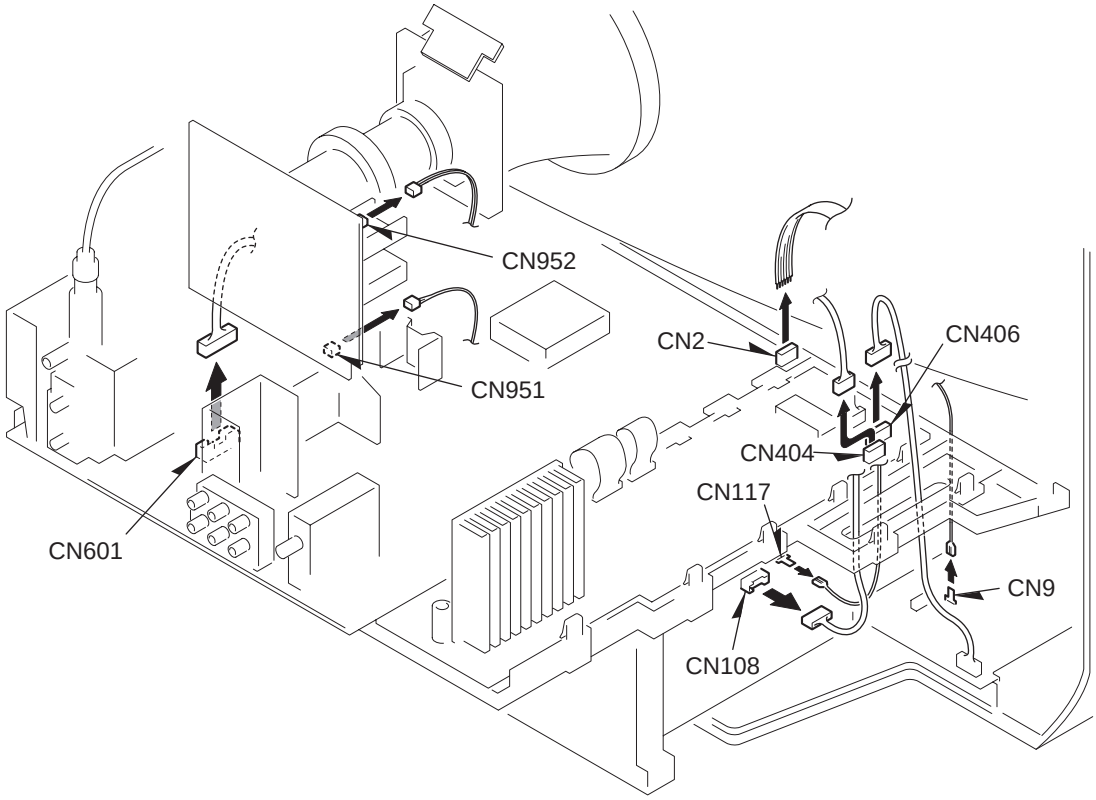


Fig-15

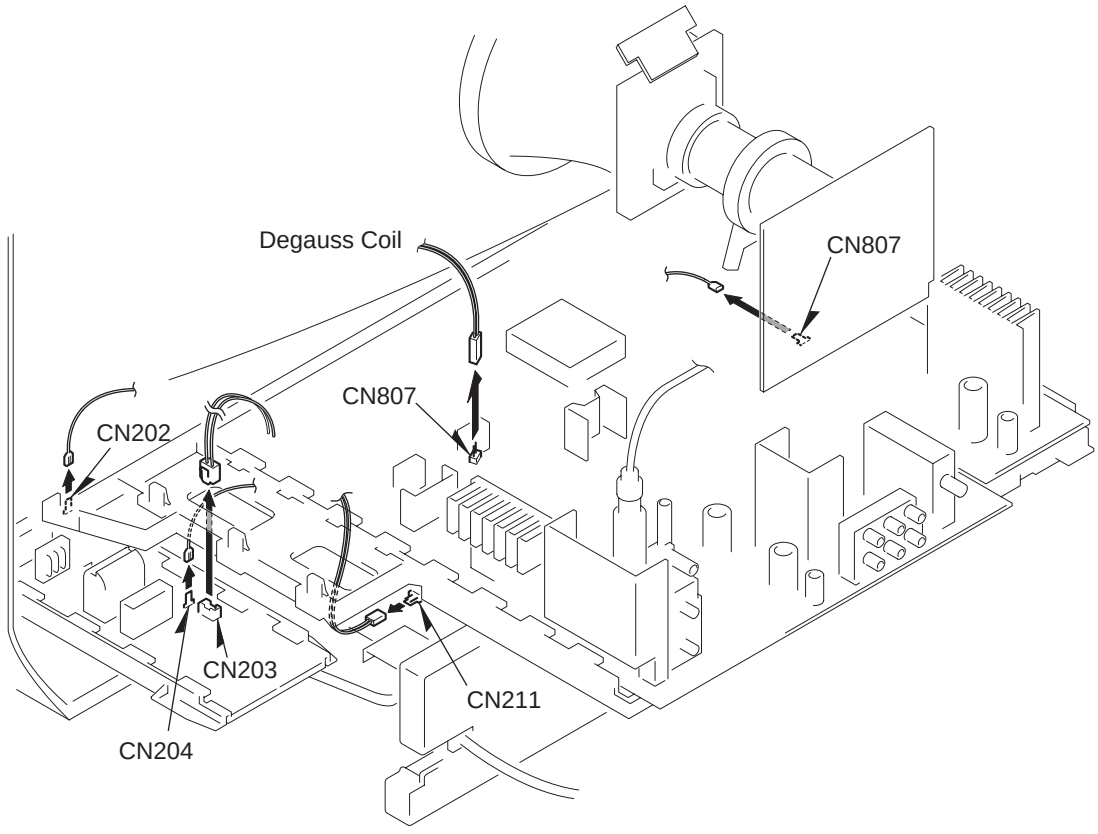


Fig-16

2-4. Remove the "NECK" board from the CRT.

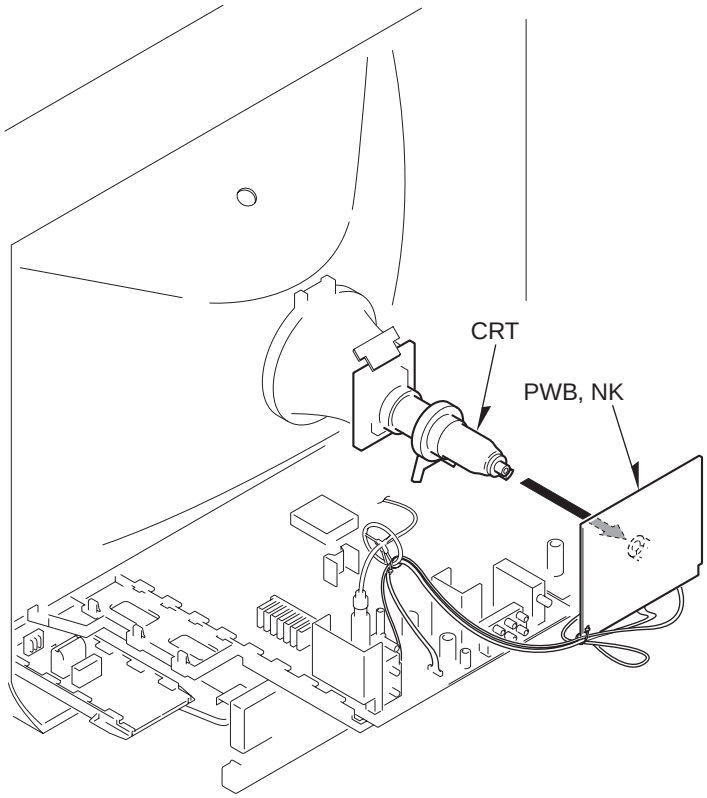


Fig-17

2-5. Remove 2 screws (F) and pull out the "Frame, TV Assy" from the set.

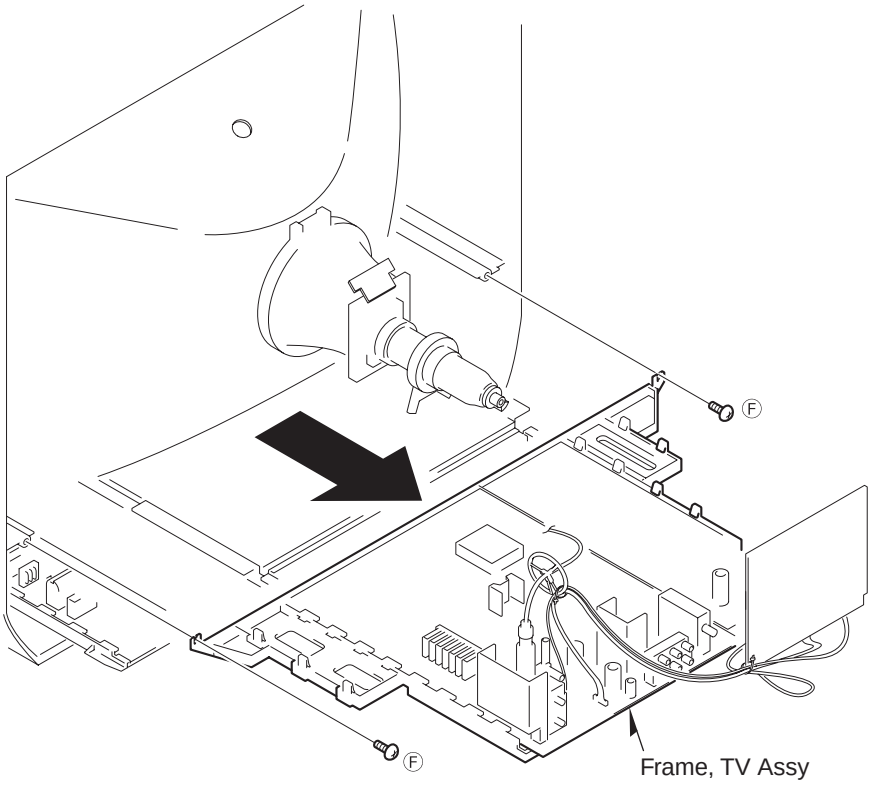


Fig-18

3. HOW TO REMOVE "MAIN" BOARD AND "AUDIO" BOARD

3-1. Remove the connector that connects the "PWB, MAIN" and "PWB, AUDIO".

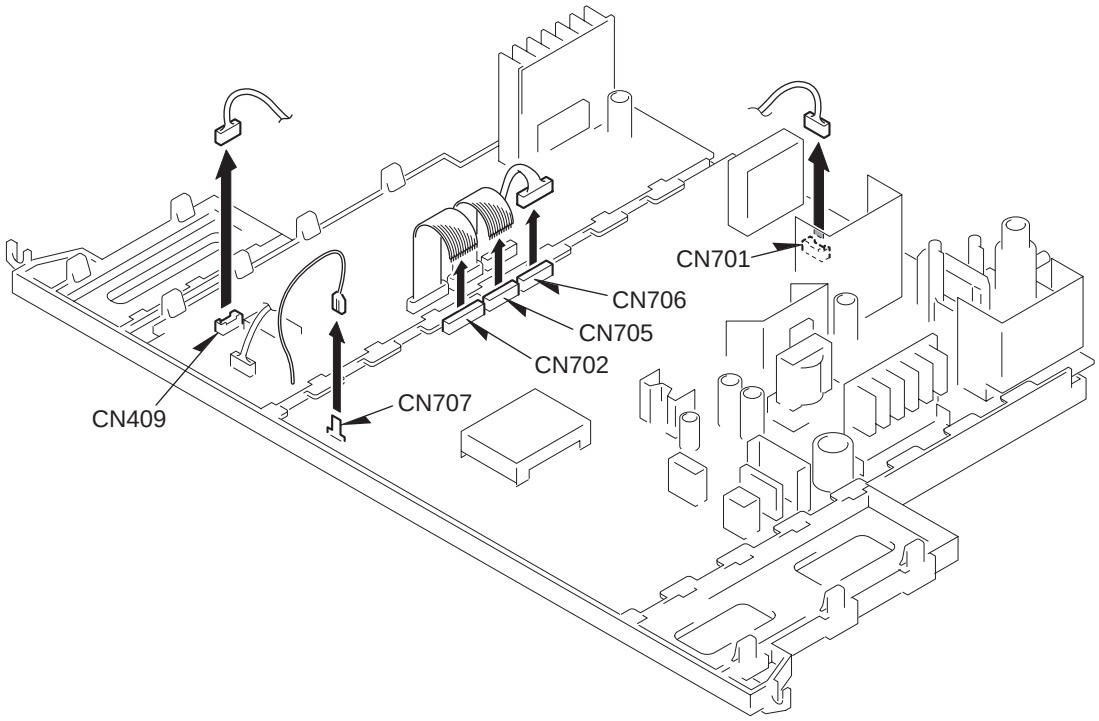


Fig-19

3-2. Remove "PWB, AUDIO" and "PWB, MAIN" from "FRAME, TV".

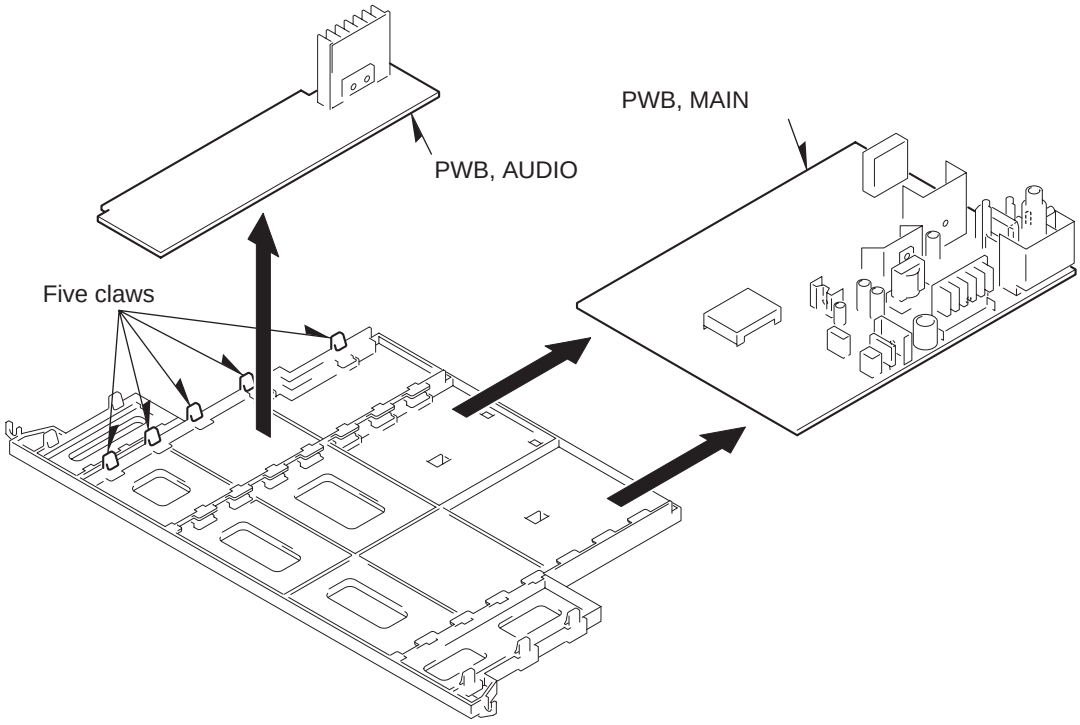


Fig-20

4. HOW TO REMOVE "MECH, ASSY" BOARD

4-1. Remove the connector.

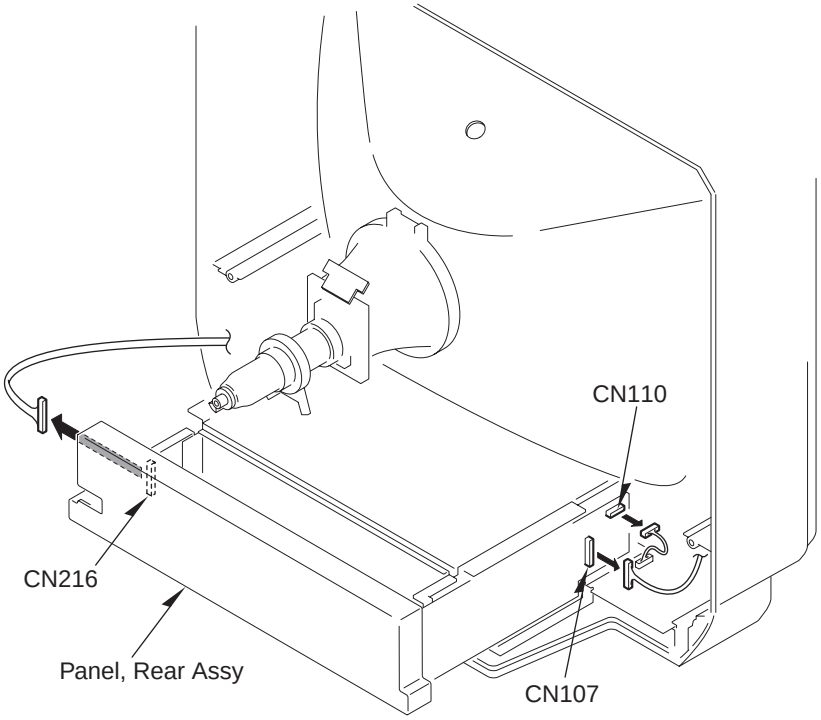


Fig-21

4-2. Remove 2 screws (G) and the screw (H). Then pull out the "Mech, Assy" and "PWB, PS-SW" at the same time.

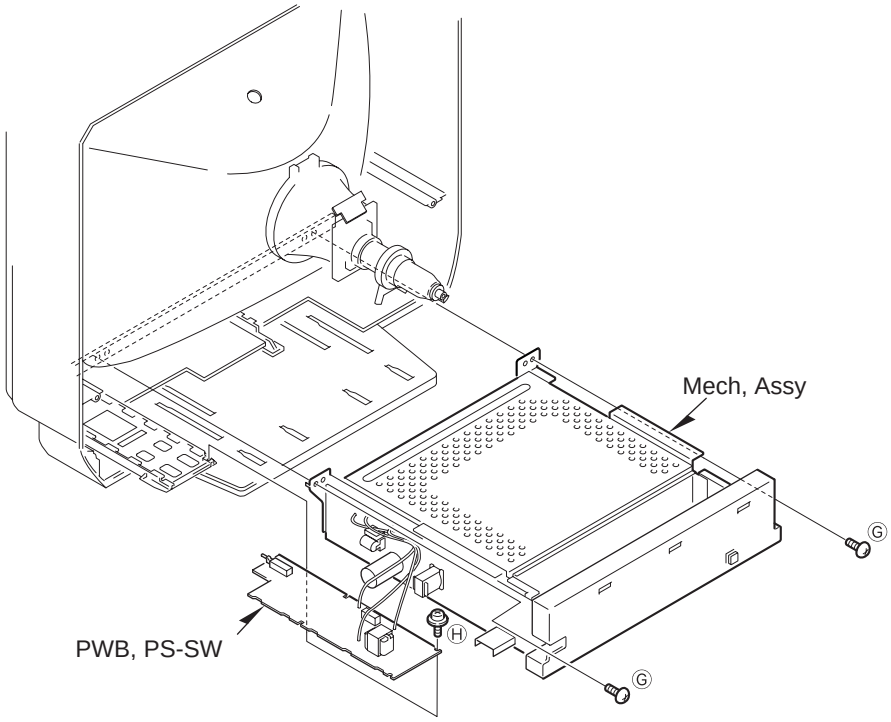


Fig-22

5. HOW TO REMOVE "PS-2" BOARD (WITH "PS-SW" BOARD), "JOINT" BOARD AND "AZG-D".

5-1. Remove 5 screws and remove the "Panel, Rear 1".

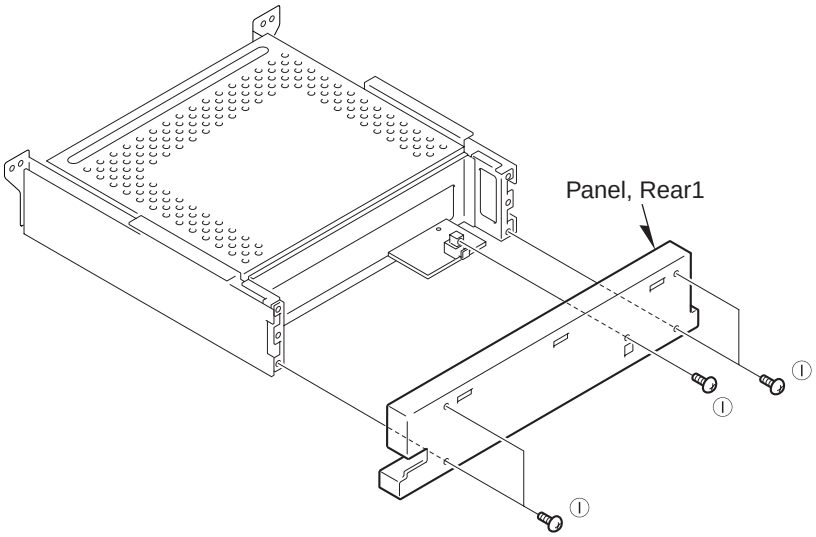


Fig-23

5-2. Remove 6 screws (J) and the connector. Then remove the "PWB, JOINT".

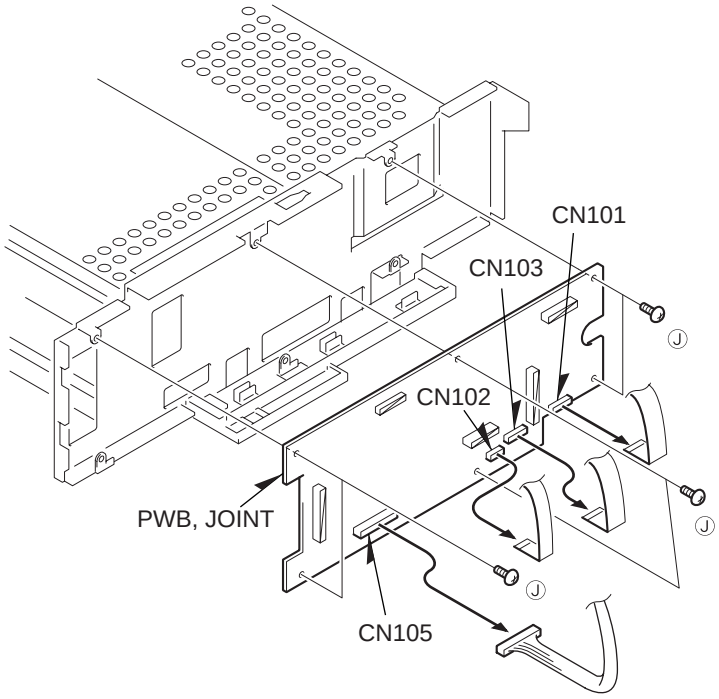


Fig-24

5-3. Remove 6 screws (K) and remove the "PWB, PS-2".

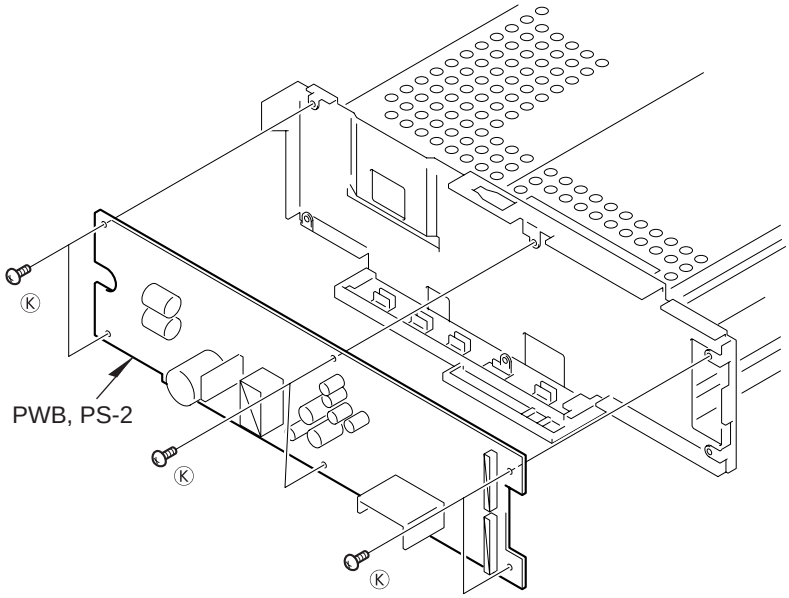


Fig-25

5-4. Remove 6 screws (L) and remove the "Shild, Assy".

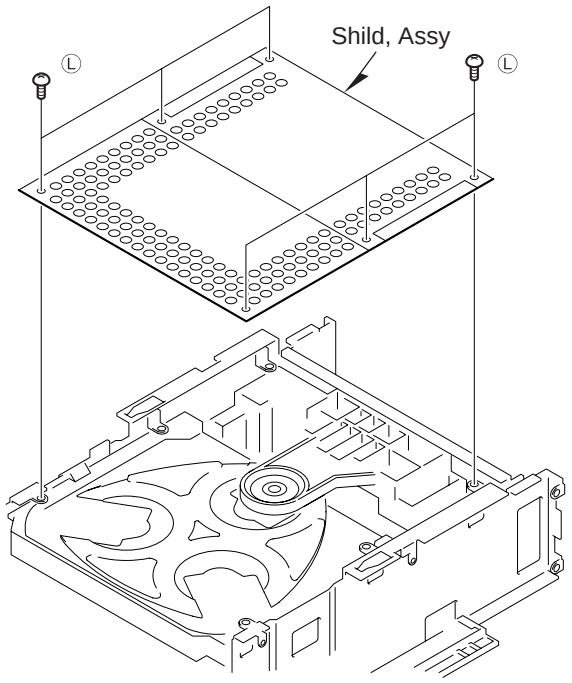


Fig-26

5-5. Remove 4 screws (M) and 3 screw (N). Then remove the "Shld-Plate, Low".

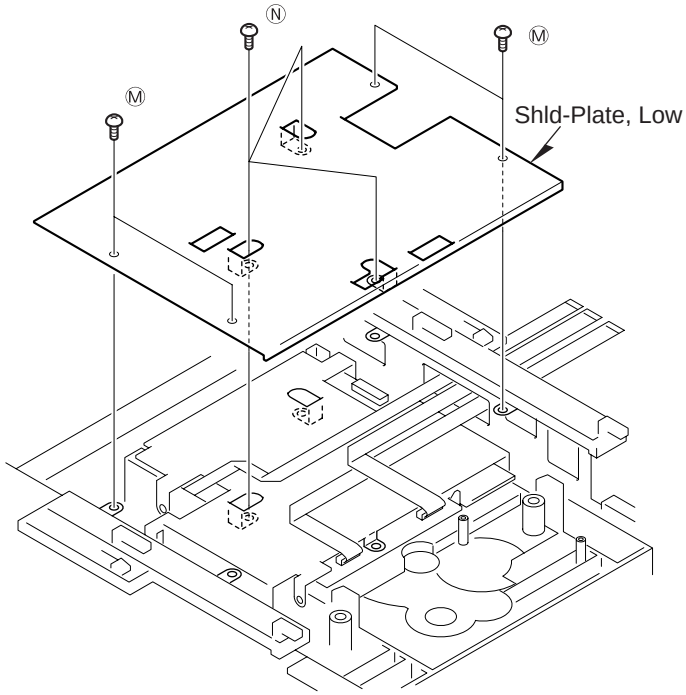


Fig-27

5-6. Remove 2 screws (O) and the screw (P). Then remove the "Hldr, Mech R Assy".

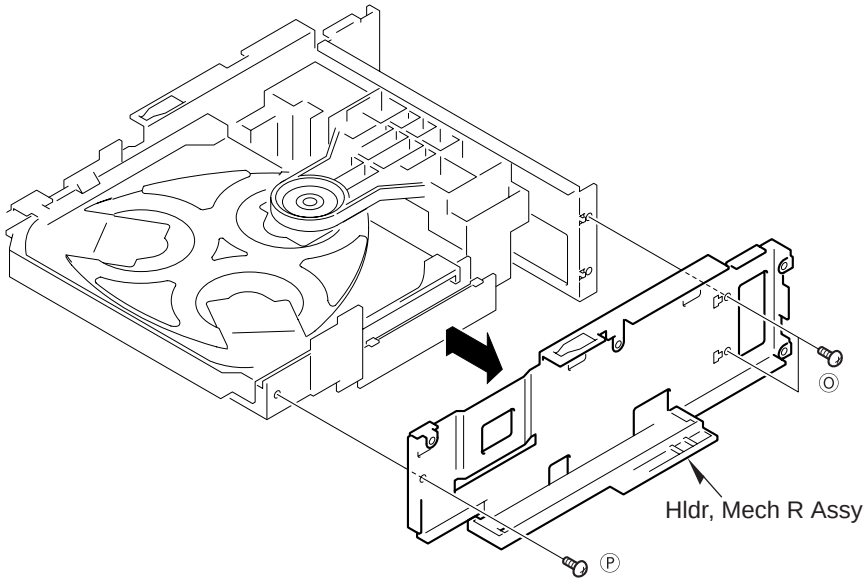


Fig-28

5-7. Remove 2 screws (Q) and the screw (R). Then remove the "Hldr, Mech L Assy".

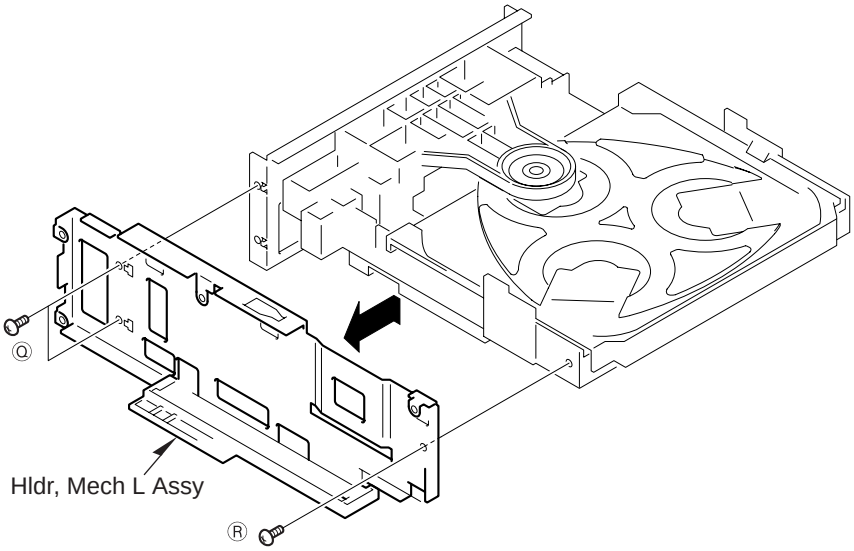


Fig-29

5-8. Remove the screw (S) and the connector. Then remove the "PWB, OPT".
5-9. Remove 2 screws (T) and remove the "Frame, Mech BK".

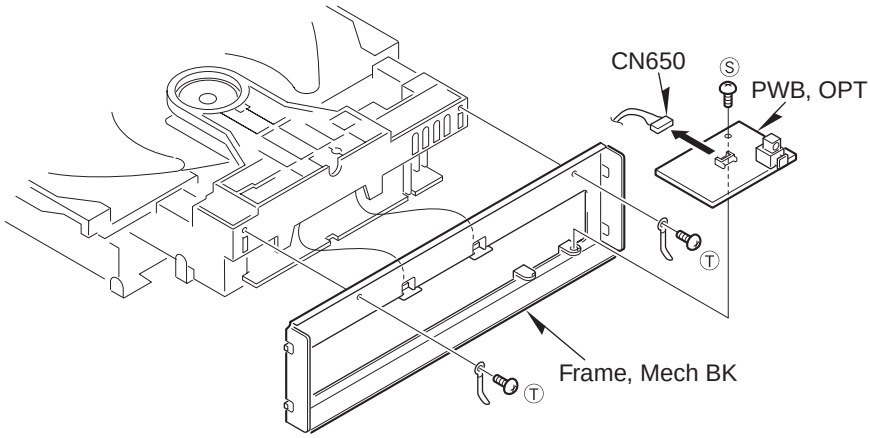


Fig-30

6. HOW TO REMOVE "FRONT" BOARD

6-1. Remove 15 screws (V) and remove the "PWB, SYSTEM" and "PWB, FR-JACK" .

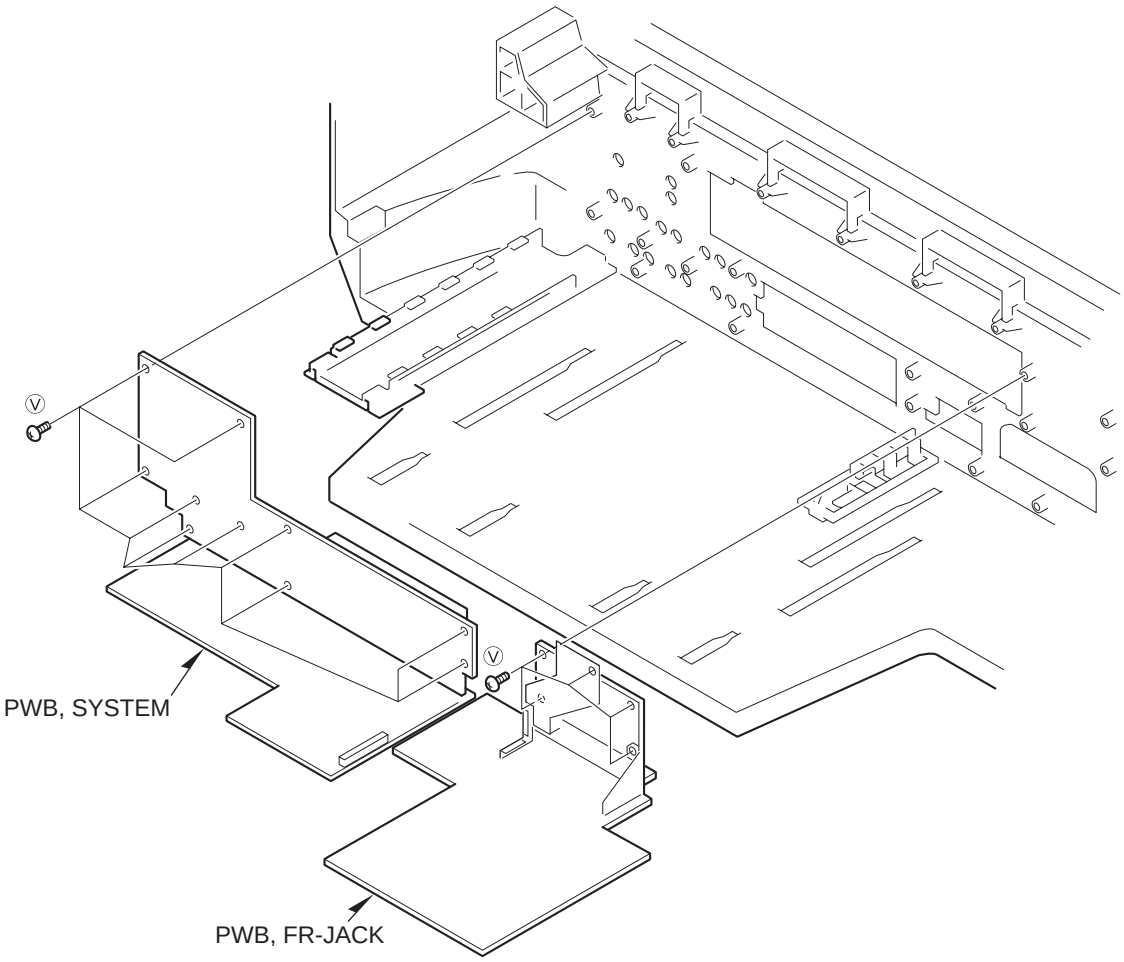


Fig-31

6-2. Remove the connector and separate the 4 boards.

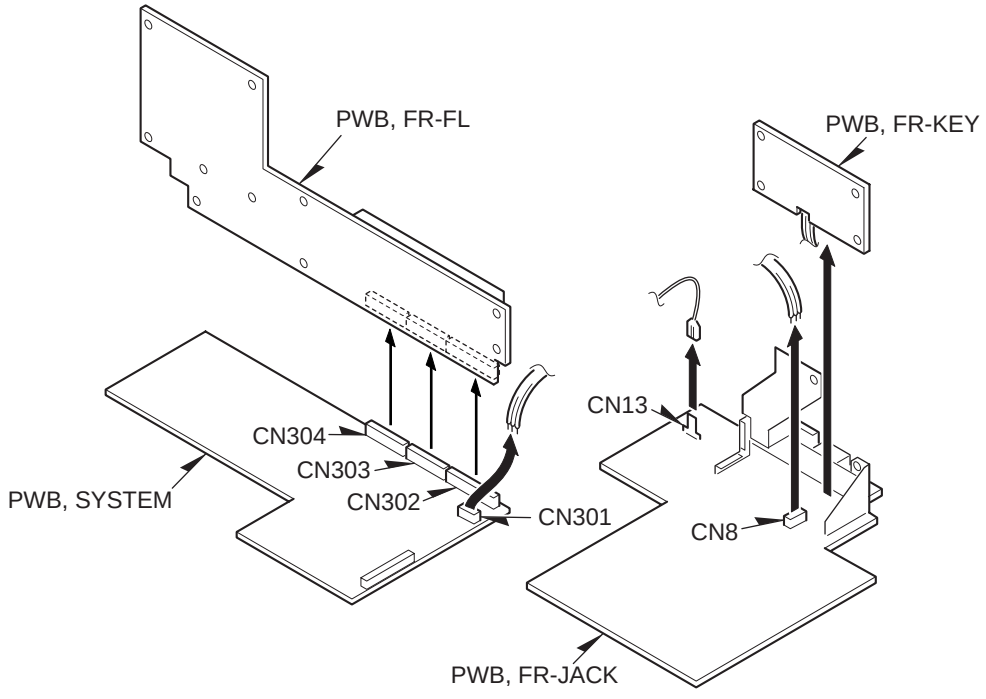
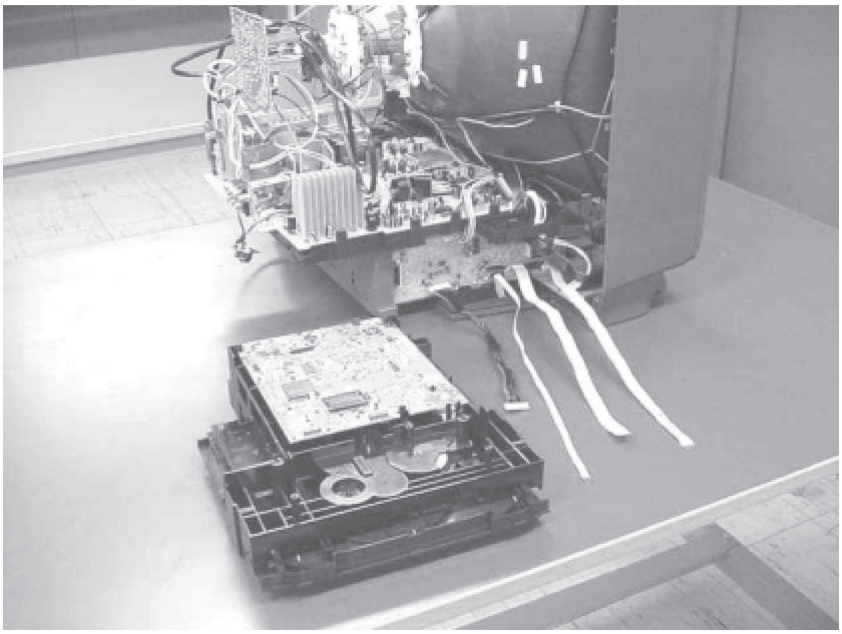


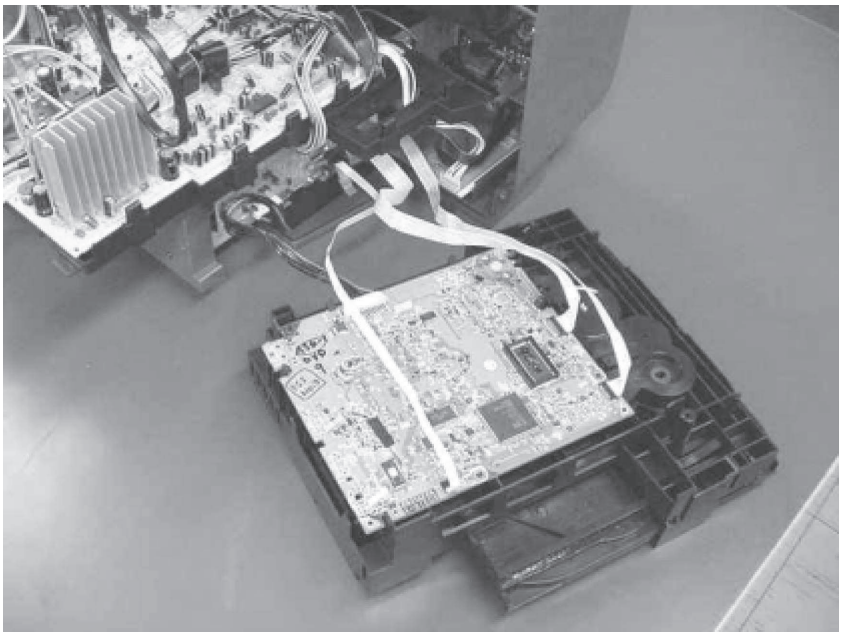
Fig-32

SERVICE POSITION

When the AZG-D is going to be repaired, take the service position as follows.

1. Disassemble the set and take the AZG-D out.
2. Reassemble the set without installing the AZG-D.
3. Pull out 4 connectors that come from the AZG-D from the left side of the set and connect them.





Note) Picture shows removal of the shield (SHLD-PLATE, LOW) from the bottom of the AZG-D.

WIRING ARRANGEMENT

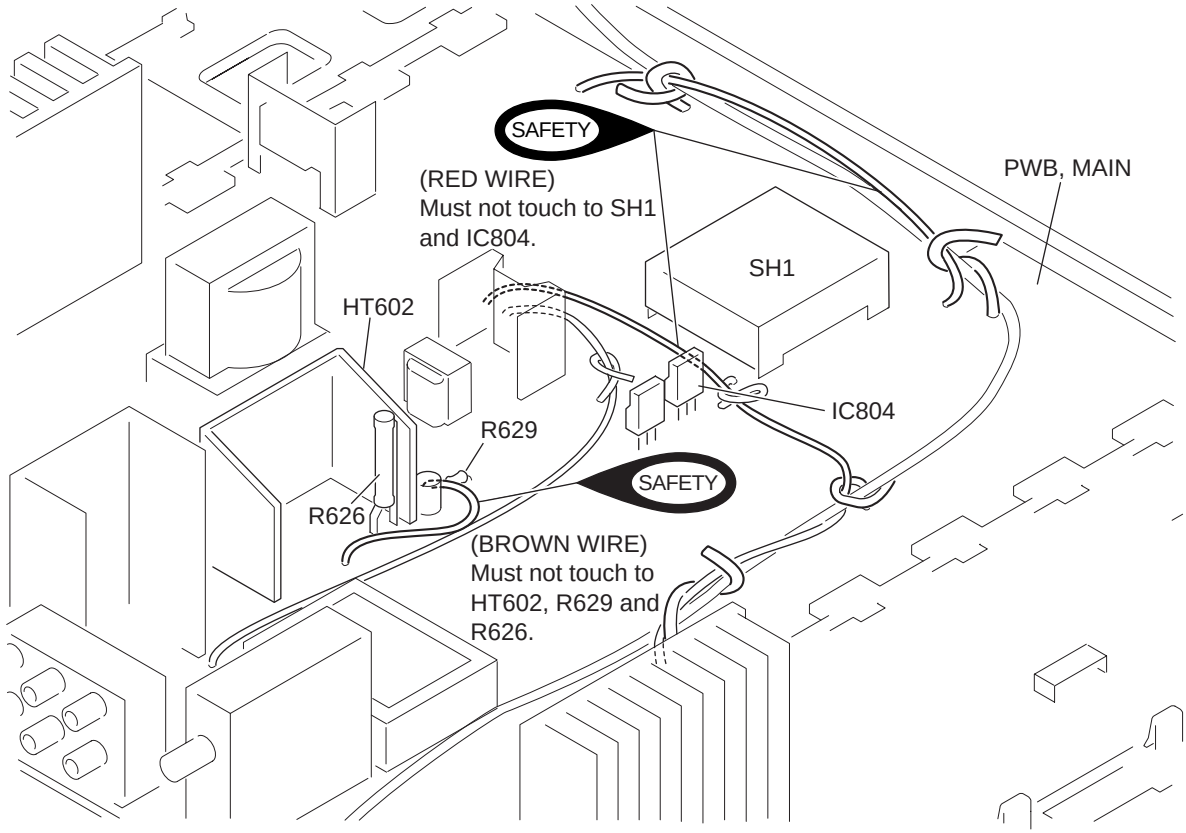
WIRE PROCESSING (WIRING, TYING) METHOD

* Be sure to follow the instructions described as follows when processing the wires during disassembling and reassembling, in order to secure safety upon completion of the repair work.
* The parts that are shown with the SAFETY mark in the illustrations, are the parts that are specifically designed as the safety related important parts by the safety regulations. Pay utmost care for these marks.
* For tying the wires, the following parts are mainly used.

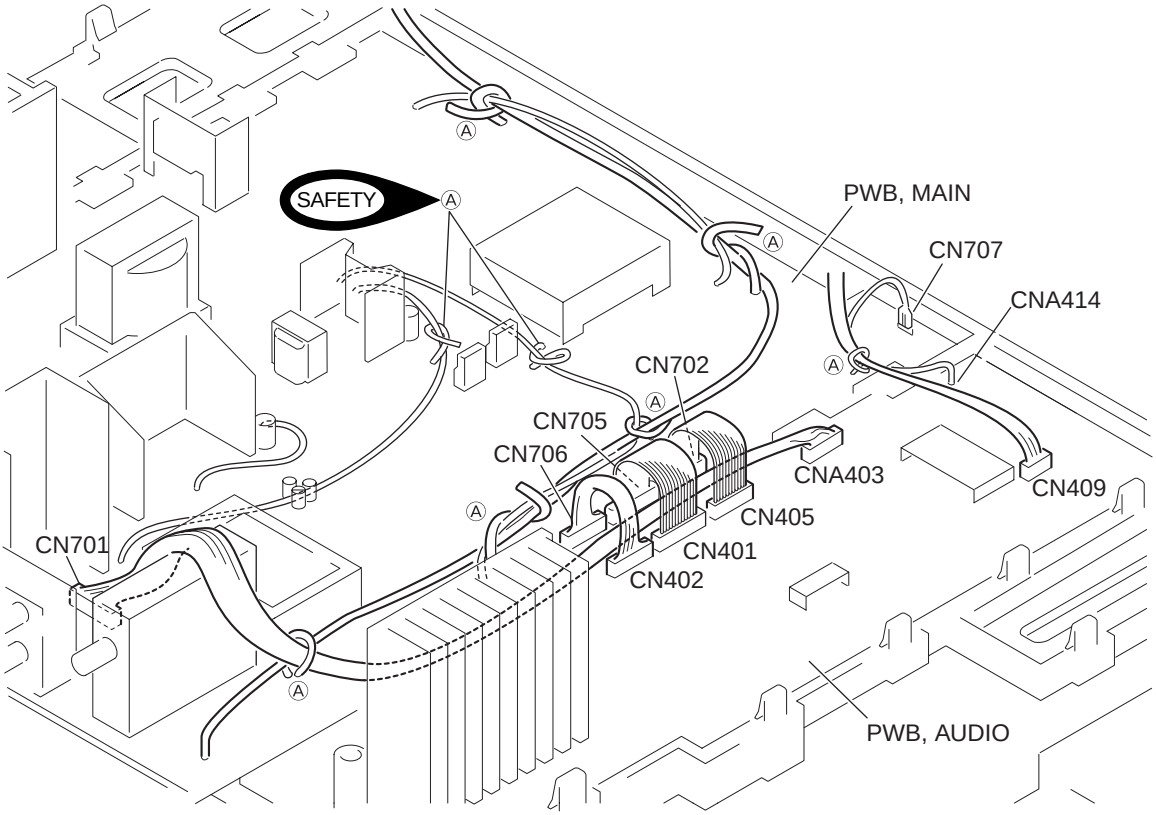
Number in illustrations	Name	Outside appearance
A	Coating lead pin	Soldered to P.Cs.
B	Wire binder	Fixed by Screws.
C	Cable,tie	Cannot be re-used.

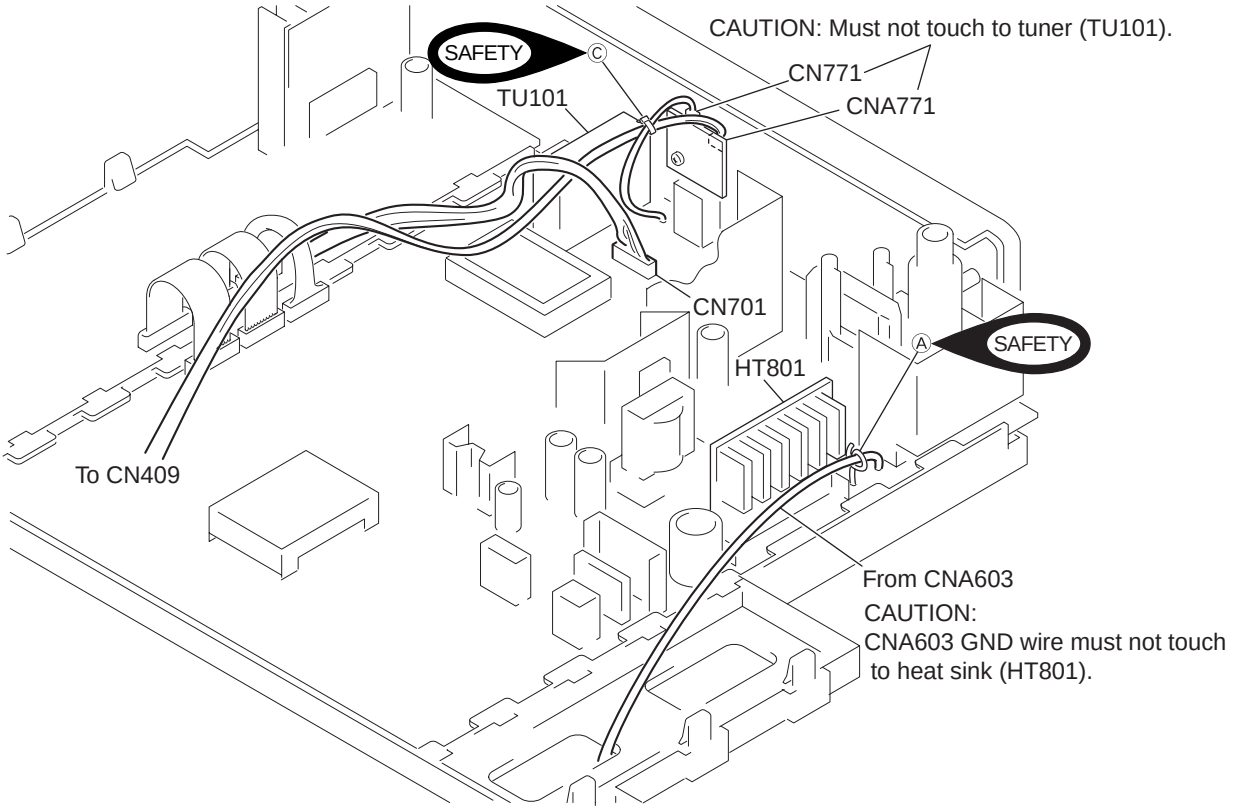
Note) Be sure to follow the instructions described as follows when processing the wires during disassembling and reassembling, in order to secure safety upon completion of the repair work.

1. Routing of the wires on top of the MAIN board.

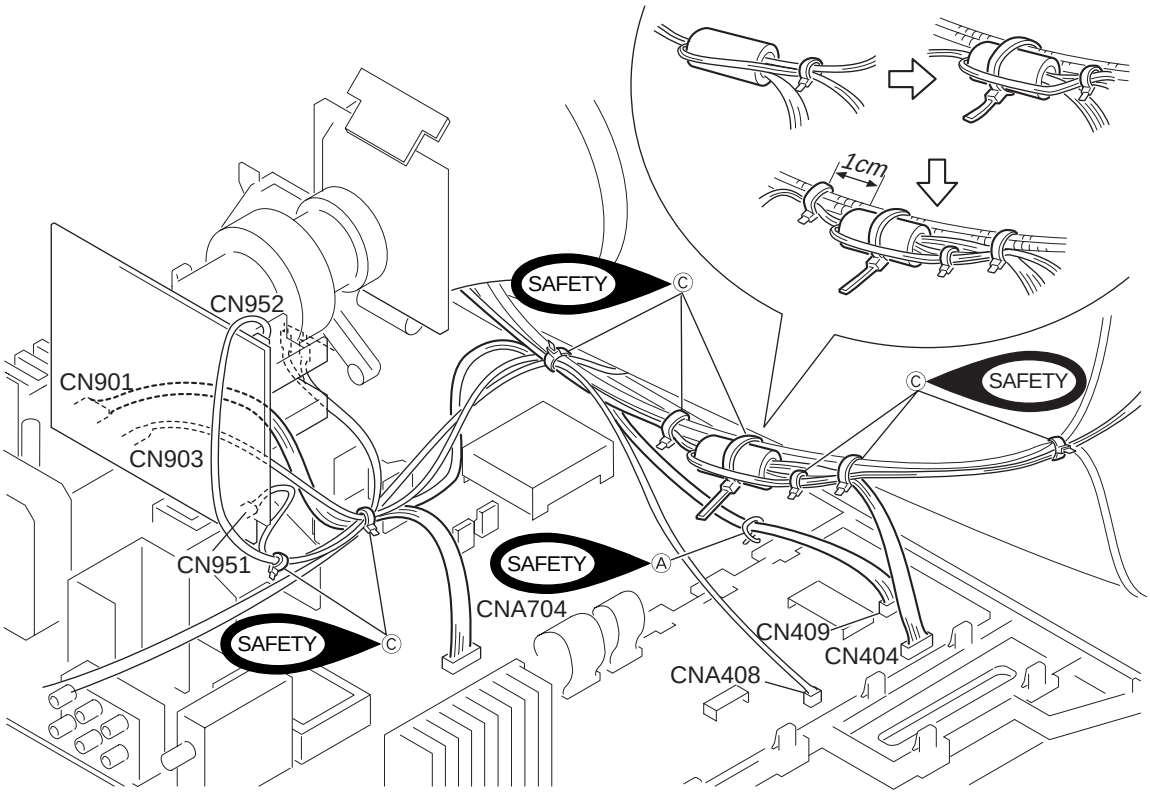


2. Wiring in the periphery of the MAIN board.

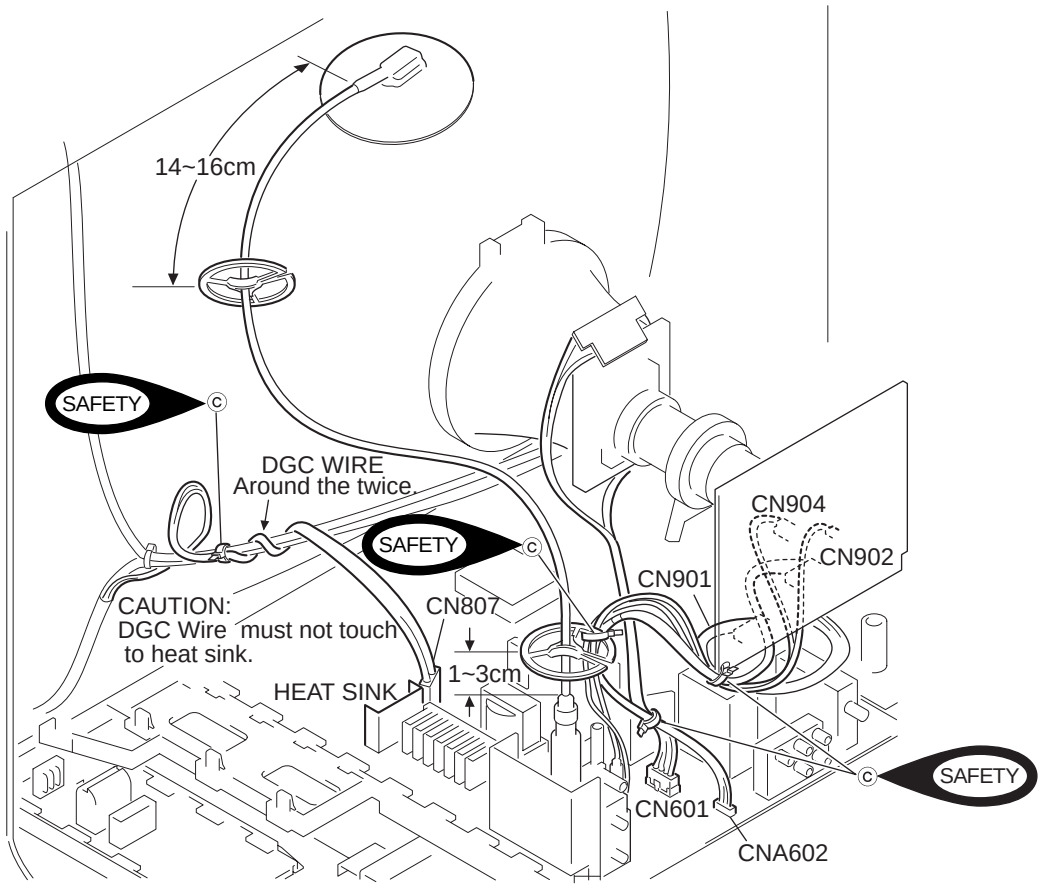




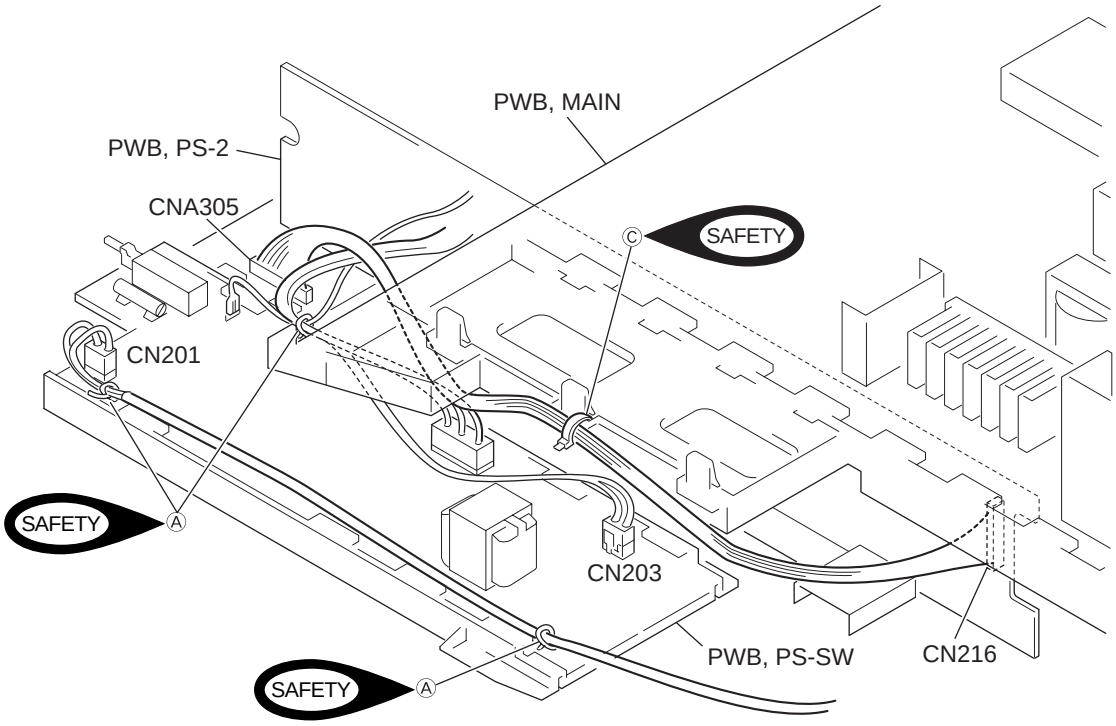
3. Wiring in the periphery of the left side of the CRT.



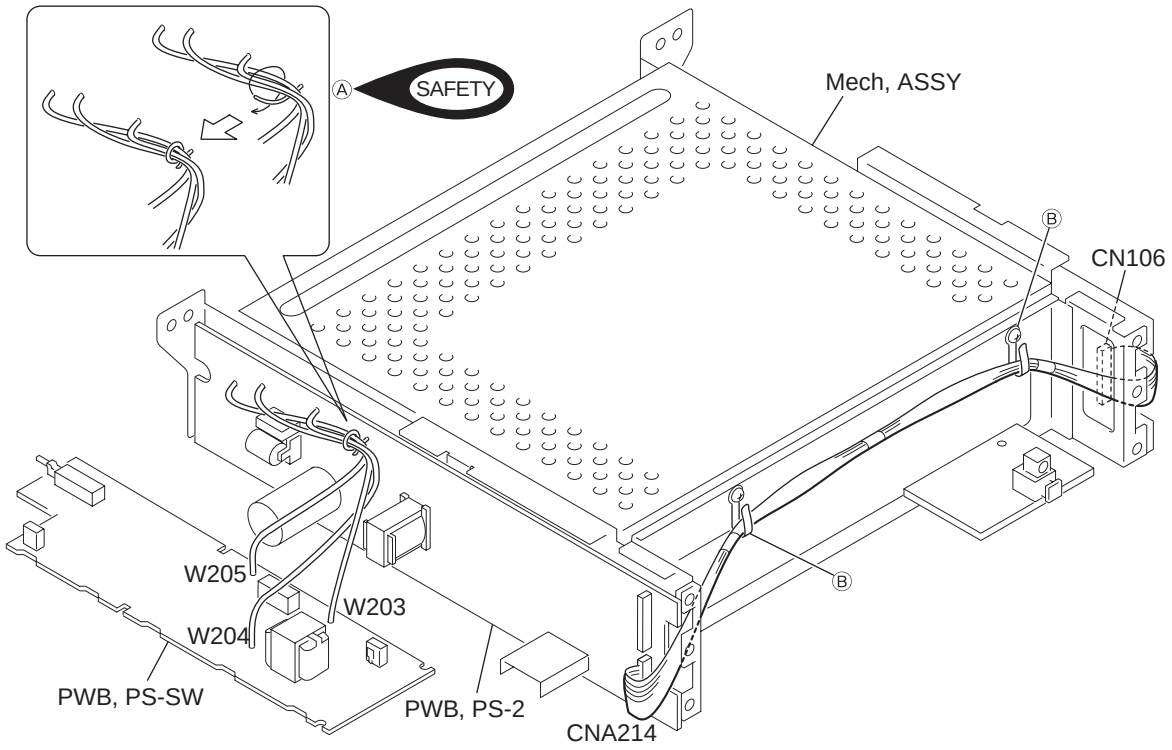
4. Wiring in the periphery of the right side of the CRT.

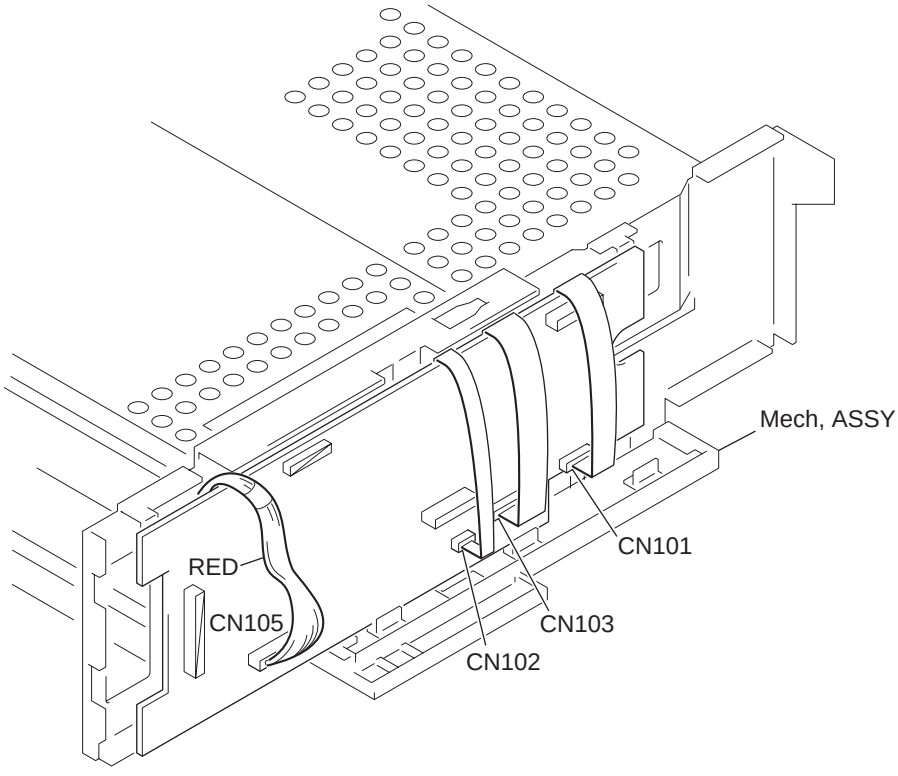


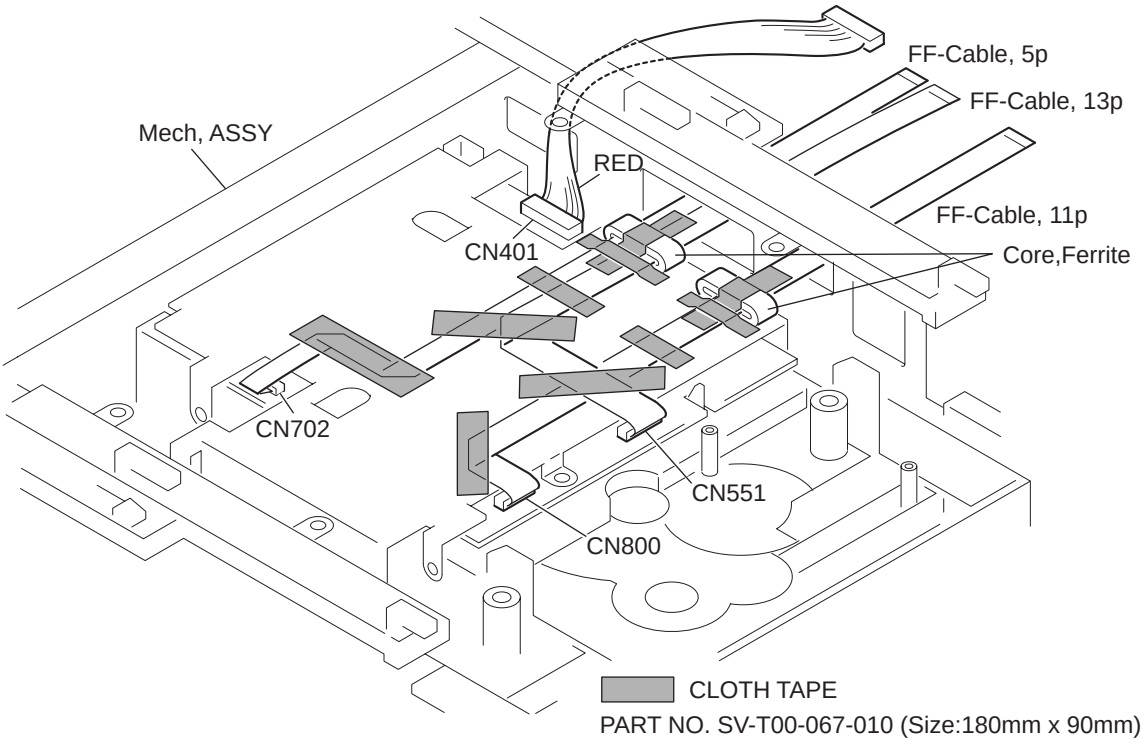
5. Wiring in the periphery of the PS-2 board.



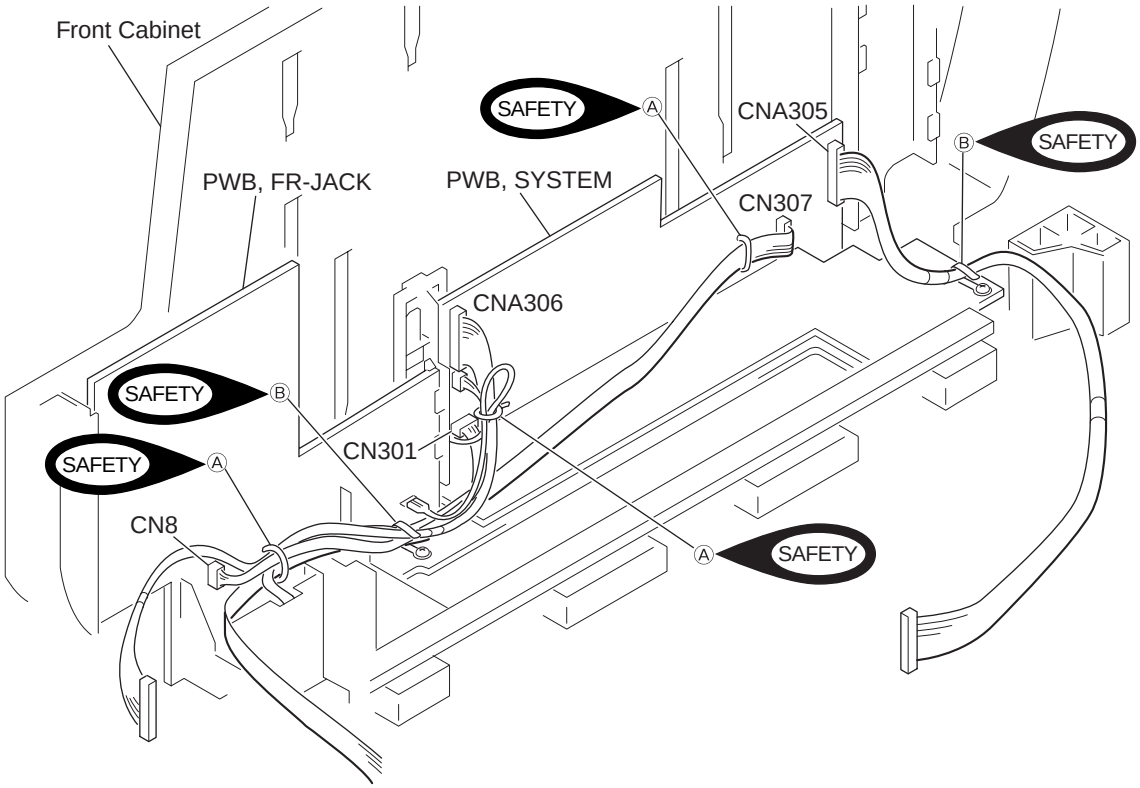
6. Wiring of the AZG-D and JOINT board.







7. Wiring of the FRONT board.



ELECTRICAL MAIN PARTS LIST

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
IC			
	8A-JD1-653-010		IC,M37272EFSP-AJD1UOTP
	87-A21-378-010		IC,S-24C04BDP-1A
	87-A20-611-080		IC,M51943BSL-700A
	87-001-536-010		IC,NJM78M05FA
	8Z-JBJ-605-010		IC,TA1268N
	87-A21-103-040		C-IC,MM1454XFBE
	87-A21-022-040		C-IC,BA3880FS
	87-A21-554-010		IC,TA1216AN
	87-A21-283-010		IC,AN5277
	87-A21-220-010		IC,MM1311AD
	87-A21-219-010		IC,TC90A45P
	87-070-237-010		IC,LA7832
	87-070-417-010		IC,NJM4558 DD
	8Z-JBH-605-010		IC,CXA2104S
	87-A21-468-010		IC,STR-F6626
	87-A21-457-010		IC,SE120N
	87-020-969-010		IC,NJM78M09FA
	87-A20-389-010		IC,NJM7809FA
	87-A21-585-010		IC,MM1232XD
	87-017-889-010		IC,NJM4558LD
	87-A21-186-010		IC,STR-F6552
	87-A20-649-080		IC,HA17431VP
	87-001-576-010		IC,MJM7812FA
	8A-JD1-650-030		C-IC,M38B59EFFP-AJD1UOTP
	8A-JD1-656-030		C-IC,UPD78F0034AYGC-AJD1UFLASH
	87-017-825-010		IC,GP1F32T
	87-070-083-010		IC,GP1U281X
TRANSISTOR			
	87-A30-065-080		TR,2SC2785FE
	87-026-269-080		TR,DTA114ES
	87-A30-066-080		TR,2SA1175FE
	87-026-219-080		TR,DTA144ES
	87-026-218-080		TR,DTC144ES
	89-324-122-080		TR,2SC2412KR
	89-110-372-080		TR,2SA1037K
	87-A30-062-080		C-TR,KRC104S
	89-324-820-080		TR,2SC2482
	87-A30-364-010		TR,2SD2578-CA
	87-A30-363-010		TR,2SD2531
	89-110-154-080		TR,2SA1015Y
	89-318-155-080		TR,2SC1815GR
	87-026-463-080		TR,2SA933SRS
	89-110-913-080		TR,2SA1091-0
	87-A30-344-010		TR,2SC5147D
	87-026-462-080		TR,2SC1740SRS
	89-407-742-080		TR,2SD774
	89-118-370-010		TR,2SA1837
	89-347-930-010		TR,2SC4793
	87-A30-217-010		TR,2SB1436(R)
	87-026-235-080		CHIP-TR,DTC114EK
	87-A30-218-080		TR,2SB1237(Q)
	87-026-227-080		CHIP-TR,DTA114EK
	87-A30-220-080		TR,2SC1741AS(R)
	87-A30-063-080		CHIP-TR,KRA104S
DIODE			
	87-017-932-080		ZENER,MTJ6.2B
	87-020-465-080		DIODE,1SS133
	87-002-743-080		ZENER,MTZJ 33B
	87-A40-235-080		ZENER,MTZJ9.1C
⚠	87-A40-690-080		ZENER,MTZJ11B
	87-A40-286-080		DIODE,RGP10JE-5025
	87-A40-348-080		ZENER,MTZJ3.3A
	87-A40-234-080		ZENER,MTZJ5.6A
	87-A40-318-080		ZENER,RM26 V1
	87-070-092-080		DIODE,S5566B
	87-A40-735-090		DIODE,ERC06-15
	87-A40-001-080		ZENER,MTZJ12C
	87-017-593-090		DIODE,RGP15J
	87-017-654-060		DIODE,GBU6J
	87-A40-450-090		DIODE,RU 1P
	87-A40-828-080		DIODE,AK 04
	87-A40-911-090		DIODE,RN 2Z
	87-A40-734-010		DIODE,FML-G12S
	87-A40-354-090		DIODE,UF3GL-6251
	87-A40-337-080		ZENER,MTZJ 6.8B
	87-A40-553-080		DIODE,1N4003 LES
	87-017-650-080		DIODE,1SS119
	87-A40-503-080		ZENER,MTZJ39B
	87-070-173-010		DIODE,S1WBA60
	87-A40-368-080		DIODE,EG01C
	87-A40-853-080		DIODE,10ELS2
	87-A40-852-090		DIODE,30DF2(F)
	87-070-274-080		DIODE,1N4003 SEM
	87-A40-367-080		DIODE,EU01
	87-A40-851-090		DIODE,31DQ04(F)
	87-A40-353-080		ZENER,HZS33-3
	87-017-079-080		ZENER,HZS4A3
	87-A40-003-080		ZENER,MTZJ4.3A
	87-A40-002-080		ZENER,MTZJ5.1C
	87-020-125-080		C-DIODE,1SS181
MAIN C.B			
C2	87-018-209-080		CAP, CER 0.1-50V
C3	87-018-134-080		CAPACITOR,TC-U 0.01-16
C4	87-018-127-080		CAP, CER 470P-50V
C5	87-010-401-080		CAP, ELECT 1-50V
C6	87-018-209-080		CAP, CER 0.1-50V
C7	87-010-248-080		CAP, ELECT 220-10V
C8	87-018-123-080		CAP, CER 220P-50V
C9	87-010-401-080		CAP, ELECT 1-50V
C10	87-018-131-080		CAP, CER 1000P-50V
C11	87-018-134-080		CAPACITOR,TC-U 0.01-16
C12	87-018-119-080		CAP, CER 100P-50V
C13	87-018-119-080		CAP, CER 100P-50V
C14	87-010-263-080		CAP, ELECT 100-10V
C15	87-018-119-080		CAP, CER 100P-50V
C16	87-018-131-080		CAP, CER 1000P-50V
C17	87-018-128-080		CAP, CERA-SOL SS 560P
C18	87-018-109-080		CAP, CER 22P-50V
C19	87-018-109-080		CAP, CER 22P-50V
C20	87-018-119-080		CAP, CER 100P-50
C21	87-018-109-080		CAP, CER 22P-50V
C22	87-018-109-080		CAP, CER 22P-50V
C23	87-018-123-080		CAP, CER 220P-50V
C24	87-018-209-080		CAP, CER 0.1-50V
C25	87-018-119-080		CAP, CER 100P-50V
C101	87-010-404-080		CAP, ELECT 4.7-50V
C104	87-010-248-080		CAP, ELECT 220-10V
C105	87-018-134-080		CAPACITOR,TC-U 0.01-16
C106	87-A10-207-080		CAP,TCS 0.01-50KBUP050
C112	87-018-109-080		CAP, CER 22P-50V
C113	87-018-109-080		CAP, CER 22P-50V
C201	87-018-134-080		CAPACITOR,TC-U 0.01-16
C202	87-018-134-080		CAPACITOR,TC-U 0.01-16
C203	87-010-400-080		CAP, ELECT 0.47-50V
C204	87-018-134-080		CAPACITOR,TC-U 0.01-16
C205	87-010-237-080		CAP, ELECT 1000-16V
C206	87-A10-287-080		CAP,M 2200P-50 J
C207	87-010-400-080		CAP, ELECT 0.47-50V
C208	87-018-134-080		CAPACITOR,TC-U 0.01-16
C209	87-010-385-080		CAP, ELECT 220-25V
C210	87-A11-080-080		CAP,TC U 47P-50 J CH

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C211	87-A11-080-080		CAP,TC U 47P-50 J CH
C212	87-A11-080-080		CAP,TC U 47P-50 J CH
C213	87-A11-082-080		CAP,TC U 56P-50 J CH
C214	87-018-134-080		CAPACITOR,TC-U 0.01-16
C229	87-018-149-080		CAP,TC-U 15P-50 CH
C301	87-010-403-080		CAP, ELECT 3.3-50V
⚠ C302	87-018-134-080		CAPACITOR,TC-U 0.01-16
C305	87-018-126-080		CAP,TC-U 390P-50 B
C306	87-010-405-080		CAP, ELECT 10-50V
C307	87-A10-299-080		CAP,M 0.022-50 J
C308	87-010-401-080		CAP, ELECT 1-50V
C309	87-018-147-080		CAP,TC-U 10P-50 CH
C311	87-018-209-080		CAP, CER 0.1-50V
C312	87-018-209-080		CAP, CER 0.1-50V
C313	87-018-209-080		CAP, CER 0.1-50V
C314	87-018-134-080		CAPACITOR,TC-U 0.01-16
C315	87-018-123-080		CAP, CER 220P-50V
C316	87-A10-378-080		CAP,E 2.2-50 K SH
C317	87-010-402-080		CAP, ELECT 2.2-50V
C318	87-018-134-080		CAPACITOR,TC-U 0.01-16
C319	87-010-237-080		CAP, ELECT 1000-16V
C321	87-010-404-080		CAP, ELECT 4.7-50V
C322	87-A10-295-080		CAP,M 0.01-50 J
C323	87-016-280-080		CAP,E 3.3-50 M BP SME
C324	87-018-134-080		CAPACITOR,TC-U 0.01-16
C325	87-018-134-080		CAPACITOR,TC-U 0.01-16
C326	87-A10-307-080		CAP,M 0.1-50 J
C327	87-018-134-080		CAPACITOR,TC-U 0.01-16
C328	87-010-405-080		CAP, ELECT 10-50V
C329	87-018-134-080		CAPACITOR,TC-U 0.01-16
C330	87-010-401-080		CAP, ELECT 1-50V
C331	87-010-544-080		CAP, ELECT 0.1-50V
C332	87-018-134-080		CAPACITOR,TC-U 0.01-16
C333	87-018-134-080		CAPACITOR,TC-U 0.01-16
C334	87-018-209-080		CAP, CER 0.1-50V
C335	87-015-997-010		CAP, ELECT 2200UF-16V
C336	87-018-134-080		CAPACITOR,TC-U 0.01-16
C337	87-018-130-080		CAP,TC-U 820P-50 B
C338	87-010-405-080		CAP, ELECT 10-50V
C339	87-018-134-080		CAPACITOR,TC-U 0.01-16
C340	87-018-118-080		CAP,TC-U 82P-50 B
C341	87-018-118-080		CAP,TC-U 82P-50 B
C342	87-018-150-080		CAP,TC-U 18P-50 CH
C343	87-A10-307-080		CAP,M 0.1-50 J
C344	87-A10-307-080		CAP,M 0.1-50 J
C501	87-010-404-080		CAP, ELECT 4.7-50V
C504	87-010-393-080		CAP, ELECT 100-35V
C505	87-018-131-080		CAP, CER 1000P-50V
C508	87-010-398-090		CAP,E 2200-35V
C509	87-A11-245-080		CAP,M/P 0.1-100 J TF-ECQV
C510	87-010-405-080		CAP, ELECT 10-50V
C605	87-A11-336-090		CAP,M/P 0.01-1.6K H ECWH(VB)
C607	87-A12-050-090		CAP,M/P 0.013-800 H ECWH(VB)
C608	87-A10-859-010		CAP,CER 390P-2K K R LONG
C609	87-A11-278-090		CAP,M/P 0.47-250 J ECWF(SR)
C610	87-A10-867-090		CAP,CER 2200P-2K K R
C611	87-010-963-080		CAP,E 2.2-160 SME
C612	87-010-976-080		CAP,CER 1000P-500 B
C613	87-016-373-080		CAP,E 10-250
C614	87-010-976-080		CAP,CER 1000P-500 B
C615	87-A10-843-080		CAP,CER 680P-1K K R
C616	87-A10-843-080		CAP,CER 680P-1K K R
C617	87-A12-082-090		CAP,E 1000-35 SMG
C618	87-A10-301-080		CAP,M 0.033-50 J
C619	87-A11-987-080		CAP,CER 6800P-250 K R HR
C620	87-010-395-080		CAP,E 330-35 SME
C621	87-018-131-080		CAP, CER 1000P-50V
C622	87-A11-124-080		CAP,TC U 2200P-50 K B
C623	87-A12-171-080		CAP,E 4.7-50 K SH
C624	87-010-976-080		CAP,CER 1000P-500 B
C626	87-010-401-080		CAP, ELECT 1-50V
C627	87-A11-984-080		CAP,CER 270P-500 K B DD10
C629	87-A10-469-080		CAP,CER 2200P-500 K B DD10
C630	87-010-405-080		CAP, ELECT 10-50V
C631	87-010-263-080		CAP, ELECT 100-10V
C655	87-A11-354-090		CAP,E 100-160 M SMG
C714	87-010-221-080		CAP, ELECT 470-10V
C720	87-015-464-080		CAP,E 4.7-16 BP
C721	87-A10-292-080		CAP,M 5600P-50 J
C722	87-A10-296-080		CAP,M 0.012-50 J
C723	87-010-401-080		CAP, ELECT 1-50V
C724	87-010-404-080		CAP, ELECT 4.7-50V
C725	87-010-405-080		CAP, ELECT 10-50V
C726	87-010-404-080		CAP, ELECT 4.7-50V
C727	87-010-112-080		CAP, ELECT 100-16V
C728	87-015-464-080		CAP,E 4.7-16 BP
C729	87-010-404-080		CAP, ELECT 4.7-50V
C730	87-015-464-080		CAP,E 4.7-16 BP
C731	87-A10-288-080		CAP,M 2700P-50 J
C733	87-016-301-080		CAP,TN 3.3-16K DN
C734	87-015-464-080		CAP,E 4.7-16 BP
C735	87-016-302-080		CAP,TN 10-16K DN
C736	87-010-401-080		CAP, ELECT 1-50V
C737	87-018-134-080		CAPACITOR,TC-U 0.01-16
C801	87-010-384-080		CAP, ELECT 100-25V
C802	87-018-131-080		CAP, CER 1000P-50V
C804	87-A10-474-090		CAP,PP 0.01-1.25K J PHS
C805	87-016-515-080		CAP,CER 1000P-1K B
C806	87-A12-169-090		CAP,E 470-200 M SMH
C807	87-A10-568-010		CAP,PP 1000P-630 J APH
C808	87-010-384-080		CAP, ELECT 100-25V
C809	87-018-131-080		CAP, CER 1000P-50V
C810	87-018-129-080		CAP, CER 680P-50V
C811	87-018-131-080		CAP, CER 1000P-50V
C813	87-018-131-080		CAP, CER 1000P-50V
C814	87-010-260-080		CAP, ELECT 47-25V
C816	87-010-405-080		CAP, ELECT 10-50V
C817	87-A10-627-090		CAP,E 2200-50V
C818	87-018-209-080		CAP, CER 0.1-50V
C820	87-010-405-080		CAP, ELECT 10-50V
C821	87-010-405-080		CAP, ELECT 10-50V
C822	87-018-209-080		CAP, CER 0.1-50V
C824	87-010-237-080		CAP, ELECT 1000-16V
C829	87-010-384-080		CAP, ELECT 100-25V
C831	87-010-405-080		CAP, ELECT 10-50V
C834	87-A10-733-090		CAP,E 220-160 SK
C835	87-016-037-060		CAP,CER 1000P-2KB
C836	87-010-260-080		CAP, ELECT 47-25V
C838	87-A12-302-090		CAP,E 1000-50 M SMG
⚠ C842	87-012-370-010		CAP,CER 3300P-250
⚠ C843	87-012-370-010		CAP,CER 3300P-250
⚠ C844	87-012-370-010		CAP,CER 3300P-250
⚠ C845	87-012-370-010		CAP,CER 3300P-250
C846	87-A10-207-080		CAP,TC U 0.01-50 KB
CF201	84-LB3-626-080		FLTR,TPS4.5MB2
CF202	84-LB3-627-080		FLTR,SFSH 4.5MDB SIF
CN1	87-009-195-010		CONN,5P B5BEH
CN2	87-009-261-010		CONN,7P V 52147
CN601	87-099-762-010		CONN,5P TBL-P V BOSS
CN701	87-A60-628-010		CONN,11P V 2MM JMT
CN705	87-009-262-010		CONN,8P 52147 MXJ
CN706	87-099-186-010		CONN,6P EH V WHT
CN707	87-A61-126-080		MALE,1P TP42097
⚠ CN807	82-481-649-010		CONN,2P V VT-50P
CNA101	8A-JD1-657-010		CONN ASSY,1P TV-TU TO PS-SW
CNA103	8A-JE7-627-010		CONN ASSY,2P MAIN-S
CNA602	8Z-JE7-661-110		CONN ASSY,5P V WHT TV-NK
CNA603	8A-JD1-658-010		CONN ASSY,1P TV-FBT TO PS-SW
CNA704	8A-JE7-617-010		CONN ASSY,6P V WHT TV-NK-2
⚠ CNA801	8A-JD1-668-010		CONN ASSY,2P TV TO PS-SW

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
CNA803	8A-JD1-669-010		CONN ASSY,2P TV TO PS
D1	87-070-110-010		LED,SLP-181B-51 RED
FB301	87-003-320-080		F-BEAD,-9.0FBR07HA121NB
FB601	87-003-223-080		FERRITE BEAD BL02RN2
FB801	87-003-320-080		F-BEAD,FBR07HA121NB
FB802	87-003-320-080		F-BEAD,FBR07HA121NB
FB803	87-003-320-080		F-BEAD,FBR07HA121NB
FB804	87-003-320-080		F-BEAD,FBR07HA121NB
FB805	87-003-320-080		F-BEAD,FBR07HA121NB
FB806	87-003-320-080		F-BEAD,FBR07HA121NB
FB807	87-003-320-080		F-BEAD,FBR07HA121NB
FR607	87-A00-652-090		RES,FUSE 0.33-1W J RF 1SL12.5
FR608	87-A00-628-090		RES,FUSE 0.68-1W J RF 1SL12.5
FR610	87-A00-628-090		RES,FUSE 0.68-1W J RF 1SL12.5
J702	87-A60-324-110		JACK,PIN 6P Y-W-R W/SW
L2	87-005-614-080		COIL 100UH LAV35 J
L101	87-005-614-080		COIL 100UH LAV35 J
L201	8Z-JBR-612-010		COIL,SIF 4.5MHZ 504BN
L203	87-005-612-080		COIL,68UH J LAV35
L204	87-003-282-080		COIL,12UH
L205	8Z-JBH-610-010		COIL,PIF-SQ57EL349A 45.75MHZ
L206	87-005-614-080		COIL 100UH LAV35 J
L207	87-003-147-080		COIL, 22UH
L208	87-003-143-080		COIL 4.7 UH
L301	87-003-097-080		COIL,1UH
L302	87-005-614-080		COIL 100UH LAV35 J
L303	87-005-614-080		COIL 100UH LAV35 J
L304	87-003-282-080		COIL,12UH
L603	87-005-757-010		COIL,3.3MH
L604	87-A50-616-080		COIL,2.2MH J LHL10
L605	8Z-JE7-608-010		COIL,HLC ZJE-7
L701	87-005-614-080		COIL 100UH LAV35 J
L801	87-A50-170-010		COIL,390UH RCH106
L803	87-A50-176-080		COIL,33UH-PJ87
⚠ PR601	87-A90-429-080		FUSE,1.25A 125V A 251
⚠ PR801	87-A90-409-080		FUSE,1.5A 125V A 251
⚠ PR802	87-A90-210-080		FUSE,7A 125V 251
⚠ PR803	87-A90-070-080		FUSE,3.5A 125V 251
⚠ PS801	87-A90-717-010		P-COUPLER,PC123FY2
⚠ PT801	8A-JD1-654-010		PT,U SW AJD-1-TV
R315	87-025-380-080		RES,M/F 15K-1/6W F
R316	87-025-427-080		RES,M/F 27K-1/6W F
R508	87-A00-541-090		RES,M/F 390-1W J RSF(S)
R604	87-A00-565-090		RES,M/F 1.2K-7W J RSU7
R612	87-A00-629-090		RES,M/F 5.6-1W J RSF(S)
R626	87-A00-676-090		RES,M/F 100-7W J RSV7
R723	87-A00-130-080		RES,M/F 62K-1/6W F
R801	87-A00-665-010		RES,CEM 56-2W J BGR2U
R802	87-A00-160-090		RES,M/F 33-2W J RSF(S)
R803	87-A00-356-090		RES,M/F 22-2W J RSS2X
R804	87-A00-633-090		RES,CEM 0.47-10W J RGC
R805	87-A00-170-090		RES,M/F 82K-3W J RSF(S)
R806	87-A00-380-090		RES,M/F 39K-3W J RSS H2
R811	87-A00-646-090		RES,CEM 0.1-5W K RGC5
R824	87-A00-718-090		RES,M/F 680-1W J RSF (S)
R833	87-A00-199-090		RES,M/F 12K-3W J RSF(S)
R834	87-A00-223-090		RES,M/F 47K-2W J RSF(S)
R844	87-A00-254-090		RES,M/F 0.68-2W J
⚠ RY801	87-A91-390-010		RELAY,AC12V G5PA-1-8
SFR501	87-024-430-080		SFR,2.2K RH063EC
SFR601	87-024-434-080		SFR,22K RH063EC
SFR602	87-024-429-080		SFR,1K RH063EC
SFR603	87-A91-856-080		SFR,K 22K H EVM EAS
SWF201	8Z-JBH-633-010		FLTR,SAW M1969-M
⚠ T601	8Z-JE7-606-010		FBT,D ZJE-7
T602	85-JT2-653-010		PT,HDT-TV141-2
⚠ TH801	87-A90-254-010		POS-THMS,PTH451BG5R0M140
TU101	8Z-JBE-610-010		TU UNIT,USA ENV56D74G3
X1	87-A70-124-080		VIB,CER 8.0MHZ
X301	87-A70-007-080		VIB,XTAL 3.58MHZ AQC-1001

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
X302	87-030-327-010		VIB,CER CSB503F30

AUDIO C.B

C400	87-010-402-080		CAP, E 2.2-50 M 11L SME
C401	87-010-404-080		CAP, ELECT 4.7-50V
C402	87-A10-295-080		CAP,M 0.01-50 J
C403	87-A10-295-080		CAP,M 0.01-50 J
C404	87-A10-307-080		CAP,M 0.1-50 J
C405	87-010-404-080		CAP, ELECT 4.7-50V
C406	87-010-260-080		CAP, ELECT 47-25V
C407	87-010-197-080		CAP, CHIP 0.01 DM
C408	87-010-405-080		CAP, ELECT 10-50V
C409	87-010-404-080		CAP, ELECT 4.7-50V
C410	87-010-404-080		CAP, ELECT 4.7-50V
C411	87-010-404-080		CAP, ELECT 4.7-50V
C413	87-A10-295-080		CAP,M 0.01-50 J
C414	87-A10-305-080		CAP,M 0.068-50 J
C415	87-A10-293-080		CAP,M 6800P-50 J
C416	87-010-260-080		CAP, ELECT 47-25V
C417	87-010-404-080		CAP, ELECT 4.7-50V
C418	87-010-197-080		CAP, CHIP 0.01 DM
C419	87-010-404-080		CAP, ELECT 4.7-50V
C420	87-010-404-080		CAP, ELECT 4.7-50V
C421	87-010-404-080		CAP, ELECT 4.7-50V
C422	87-A10-293-080		CAP,M 6800P-50 J
C424	87-010-260-080		CAP, ELECT 47-25V
C425	87-A10-305-080		CAP,M 0.068-50 J
C426	87-A10-295-080		CAP,M 0.01-50 J
C427	87-010-404-080		CAP, ELECT 4.7-50V
C428	87-010-189-080		C-CAP,S 8200P-50 B
C429	87-012-365-080		C-CAP,S 0.027-25VBK
C430	87-010-401-080		CAP, ELECT 1-50V
C431	87-010-189-080		C-CAP,S 8200P-50 B
C432	87-010-197-080		CAP, CHIP 0.01 DM
C433	87-010-260-080		CAP, ELECT 47-25V
C434	87-012-365-080		C-CAP,S 0.027-25VBK
C435	87-010-401-080		CAP, ELECT 1-50V
C436	87-010-401-080		CAP, ELECT 1-50V
C437	87-010-401-080		CAP, ELECT 1-50V
C438	87-010-178-080		CHIP CAP 1000P
C439	87-A10-307-080		CAP,M 0.1-50 J
C440	87-A10-307-080		CAP,M 0.1-50 J
C441	87-A10-307-080		CAP,M 0.1-50 J
C442	87-010-401-080		CAP, ELECT 1-50V
C443	87-010-405-080		CAP, ELECT 10-50V
C444	87-010-405-080		CAP, ELECT 10-50V
C445	87-010-405-080		CAP, ELECT 10-50V
C446	87-010-405-080		CAP, ELECT 10-50V
C447	87-010-405-080		CAP, ELECT 10-50V
C448	87-010-197-080		CAP, CHIP 0.01 DM
C449	87-010-402-080		CAP, ELECT 2.2-50V
C450	87-010-247-080		CAP, ELECT 100-50V
C451	87-010-388-080		CAP ELECT 1000-25V SME
C452	87-010-388-080		CAP ELECT 1000-25V SME
C453	87-010-178-080		C-CAP,S 1000P-50 KB
C454	87-010-917-090		CAP,E 3300-50 M SMG
C455	87-010-247-080		CAP, ELECT 100-50 M SME
C460	87-010-197-080		CAP, CHIP 0.01 DM
C464	87-010-260-080		CAP, ELECT 47-25V
C465	87-010-198-080		CAP, CHIP 1000P-50 KB
C466	87-A10-295-080		CAP,M 0.01-50 J
C467	87-010-401-080		CAP, ELECT 1-50V
C468	87-A10-295-080		CAP,M 0.01-50 J
C469	87-A10-295-080		CAP,M 0.01-50 J
C470	87-010-154-080		CAP CHIP 10P
C471	87-012-155-080		C-CAP 180P-50CH
C472	87-A10-295-080		CAP,M 0.01-50 J
C473	87-A10-295-080		CAP,M 0.01-50 J

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C474	87-A10-295-080		CAP,M 0.01-50 J
C475	87-010-198-080		CAP, CHIP 1000P-50 KB
C476	87-010-260-080		CAP, ELECT 47-25V
C477	87-010-316-080		C-CAP,S 33P-50 CH
C478	87-010-316-080		C-CAP,S 33P-50 CH
C479	87-010-318-080		C-CAP,S 47P-50 CH
C480	87-010-316-080		C-CAP,S 33P-50 CH
C481	87-010-316-080		C-CAP,S 33P-50 CH
C482	87-010-196-080		CHIP CAPACITOR,0.1-25
C483	87-010-260-080		CAP, ELECT 47-25V
C484	87-010-197-080		CAP, CHIP 0.01 DM
C486	87-010-197-080		CAP, CHIP 0.01 DM
C487	87-010-196-080		CHIP CAPACITOR,0.1-25
C488	87-010-384-080		CAP, ELECT 100-25V
C489	87-010-197-080		CAP, CHIP 0.01 DM
C493	87-A10-307-080		CAP,M 0.1-50 J
C494	87-A10-307-080		CAP,M 0.1-50 J
C495	87-010-400-080		CAP, ELECT 0.47-50V
C496	87-010-400-080		CAP, ELECT 0.47-50V
C497	87-010-405-080		CAP, ELECT 10-50V
C498	87-010-402-080		CAP, E 2.2-50 M 11L SME
C751	87-010-545-080		CAP, ELECT 0.22-50V
C752	87-010-402-080		CAP, ELECT 2.2-50V
C753	87-010-545-080		CAP, ELECT 0.22-50V
C754	87-010-402-080		CAP, ELECT 2.2-50V
C755	87-010-197-080		CAP, CHIP 0.01 DM
C756	87-010-545-080		CAP, ELECT 0.22-50V
C757	87-010-402-080		CAP, ELECT 2.2-50V
C758	87-010-545-080		CAP, ELECT 0.22-50V
C759	87-010-402-080		CAP, ELECT 2.2-50V
C760	87-010-197-080		CAP, CHIP 0.01 DM
C761	87-010-314-080		C-CAP,S 22P-50V
C762	87-010-314-080		C-CAP,S 22P-50V
C763	87-010-405-080		CAP, ELECT 10-50V
C764	87-010-401-080		CAP, ELECT 1-50V
C765	87-010-382-080		CAP, ELECT 22-25V
C766	87-010-402-080		CAP, ELECT 2.2-50V
C767	87-010-401-080		CAP, ELECT 1-50V
C768	87-010-402-080		CAP, ELECT 2.2-50V
C769	87-010-405-080		CAP, ELECT 10-50V
C770	87-010-405-080		CAP, ELECT 10-50V
C780	87-010-405-080		CAP, ELECT 10-50V
C781	87-010-405-080		CAP, ELECT 10-50V
CN401	87-009-314-010		CONN 8P 51048
CN404	87-049-469-010		CONN,4P V
CN405	87-009-317-010		CONN,11P 51048
CN406	87-099-407-010		CONN,7P V WHT EH
CN407	8A-JD1-675-010		CONN ASSY,8P V AUDIO TO JOINT
CN409	87-009-033-010		CONNECTOR, 5P
CNA401	8A-JD1-659-010		CONN ASSY,1P AUDIO TO FR-JACK
CNA402	8A-JE7-610-010		CONN ASSY,6P V WHT AU-MAIN
CNA403	8A-JE7-611-010		CONN ASSY,11P V WHT AU-VD
CNA404	8A-JD1-648-010		CONN ASSY,4P SPEAKER
CNA408	8Z-JE7-663-010		CONN ASSY,2P COMB-NK
CNA414	8A-JE7-626-010		CONN ASSY,1P AU-MAIN
CNA416	8A-JD1-659-010		CONN ASSY,1P AUDIO TO FR-JACK
DL401	87-A91-598-010		DELAY LINE,350NS EQFK5-MT
FR401	87-A00-478-090		RES,FUSE 2.2-1W J
FR402	87-A00-478-090		RES,FUSE 2.2-1W J
L401	87-005-614-080		COIL 100UH LAV35 J
L403	87-005-614-080		COIL 100UH LAV35 J
L404	87-005-614-080		COIL 100UH LAV35 J
L405	87-003-284-080		COIL,27UH LAL02
L406	87-003-284-080		COIL,27UH LAL02
L407	87-A50-555-010		COIL,100UH K 7212M-101K
R432	87-A00-753-090		RES,M/F 1.6—7W K RSV7
W401	8A-JE7-612-010		F-CABLE,8P 2.0 70MM
W405	8A-JE7-613-010		F-CABLE,11P 2.0 70MM

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
NK C.B			
C901	87-010-405-080		CAP, ELECT 10-50V
C902	87-010-968-080		CAP,CER 680P-2K K B
C903	87-010-405-080		CAP, ELECT 10-50V
C906	87-010-400-080		CAP, ELECT 0.47-50V
C907	87-010-235-080		CAP,E 470-16 SME
C908	87-018-129-080		CAP, CER 680P-50V
C909	87-018-129-080		CAP, CER 680P-50V
C910	87-018-129-080		CAP, CER 680P-50V
C911	87-018-127-080		CAP, CER 470P-50V
C912	87-018-127-080		CAP, CER 470P-50V
C913	87-018-127-080		CAP, CER 470P-50V
C914	87-A10-052-080		CAP,E 2.2-250
C915	87-010-260-080		CAP, ELECT 47-25V
C916	87-018-134-080		CAPACITOR,TC-U 0.01-16
C917	87-010-970-090		CAP,CER 4700P-2K B F
C951	87-010-381-080		CAP, ELECT 330-16V
C954	87-010-405-080		CAP, ELECT 10-50V
C955	87-010-405-080		CAP, ELECT 10-50V
C956	87-010-405-080		CAP, ELECT 10-50V
C959	87-A10-050-010		CAP,CER 4700P-500
C960	87-010-221-080		CAP, ELECT 470-10V
C961	87-A12-168-080		CAP,E 33-160 M SMG
C962	87-A12-010-080		CAP,M/P 0.047-250 J ECQE2
C963	87-A10-283-080		CAP,M 1000P-50 J
C964	87-A10-283-080		CAP,M 1000P-50 J
C965	87-010-963-080		CAP,E 2.2-160 SME
C966	87-A12-014-080		CAP,M/P 0.1-250 J ECQE2
C967	87-A10-303-080		CAP,M 0.047-50 J
C968	87-010-221-080		CAP, ELECT 470-10V
CN901	87-009-034-010		CONN,6P PH V
CN902	87-009-195-010		CONN,5P B5BEH
CN903	87-A61-126-080		MALE, 1P TP42097
CN904	87-A61-060-080		CONN,1P V RED TP00706
CN951	87-009-030-010		CONNECTOR 2P PH M
CN952	87-099-043-010		CONN 2P EH
CNA952	8A-JE7-620-010		CONN ASSY,2P VM-NK
L901	87-005-614-080		COIL 100UH LAV35 J
L902	87-005-614-080		COIL 100UH LAV35 J
L903	87-005-614-080		COIL 100UH LAV35 J
L951	87-005-482-080		COIL,56UH FLR50 J
L952	87-005-481-080		COIL,47UH J FLR50
R901	87-A00-242-090		RES,M/F 8.2K-3W J RS
R902	87-A00-242-090		RES,M/F 8.2K-3W J RS
R903	87-A00-242-090		RES,M/F 8.2K-3W J RS
R968	87-022-382-090		RES,M/O 120-2W J
R969	87-A00-638-080		RES,M/F 47-1/2W J SPR
R970	87-A00-634-080		RES,M/F 2.7-1/4W J SPR
R971	87-A00-636-080		RES,M/F 560-1/4W J SPR
R973	87-A00-637-080		RES,M/F 1K-1/4W J SPR
R974	87-022-556-090		RES,M/O 180-3W J
R976	87-A00-636-080		RES,M/F 560-1/4W J SPR
R977	87-A00-634-080		RES,M/F 2.7-1/4W J SPR
R978	87-A00-635-080		RES,M/F 47-1/4W J SPR
SO901	8A-JE7-670-010		SOCKET,CRT 11P HPS1521-013411
S-JACK C.B			
C771	87-010-322-080		C-CAP,S 100P-50 CH
C772	87-010-197-080		CAP, CHIP 0.01 DM
CN771	87-009-345-010		CONN 2P H WHT PH
CNA771	8Z-JE5-631-010		CONN ASSY,5P S-JK
J771	87-A61-174-010		JACK,Y/CYKF51-5558
JOINT C.B			
C102	87-010-260-080		CAP, ELECT 47-25V
C103	87-010-405-080		CAP, ELECT 10-50V
C104	87-010-405-080		CAP, ELECT 10-50V
C105	87-012-286-080		CAP, U 0.01-25

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C106	87-010-405-080		CAP, ELECT 10-50V
C107	87-010-405-080		CAP, ELECT 10-50V
C108	87-010-405-080		CAP, ELECT 10-50V
C109	87-010-405-080		CAP, ELECT 10-50V
C110	87-012-286-080		CAP, U 0.01-25
C111	87-012-286-080		CAP, U 0.01-25
C112	87-012-286-080		CAP, U 0.01-25
C113	87-010-405-080		CAP, ELECT 10-50V
C114	87-010-405-080		CAP, ELECT 10-50V
C115	87-012-286-080		CAP, U 0.01-25
C119	87-012-286-080		CAP, U 0.01-25
C120	87-012-286-080		CAP, U 0.01-25
C126	87-012-286-080		CAP, U 0.01-25
C127	87-010-382-080		CAP, ELECT 22-25V
C128	87-010-382-080		CAP, ELECT 22-25V
C129	87-010-382-080		CAP, ELECT 22-25V
C131	87-010-382-080		CAP, ELECT 22-25V
C132	87-018-119-080		CAP, CER 100P-50V
C133	87-018-119-080		CAP, CER 100P-50V
C135	87-012-286-080		CAP, U 0.01-25
C136	87-012-286-080		CAP, U 0.01-25
C137	87-010-401-080		CAP, ELECT 1-50V
C138	87-012-172-080		CAPACITOR CHIP U 10P CH
C139	87-010-401-080		CAP, ELECT 1-50V
C140	87-012-172-080		CAPACITOR CHIP U 10P CH
C141	87-012-172-080		CAPACITOR CHIP U 10P CH
C142	87-012-172-080		CAPACITOR CHIP U 10P CH
C143	87-010-831-080		C-CAP,U,0.1-16F
C144	87-010-831-080		C-CAP,U,0.1-16F
C145	87-010-260-080		CAP, ELECT 47-25V
C146	87-012-286-080		CAP, U 0.01-25
C147	87-010-260-080		CAP, ELECT 47-25V
C148	87-010-235-080		CAP, ELECT 470-16 M SME
CN101	87-A61-272-010		CONN,11P V BLK FMN-BTRK
CN102	87-A61-273-010		CONN,5P V BLK FMN-BTRK
CN103	87-A61-274-010		CONN,13P V BLK FMN-BTRK
CN105	87-A60-629-010		CONN,12P V 2MM JMT
CN106	87-A60-632-010		CONN,15P V 2MM JMT
CN107	87-A60-631-010		CONN,14P V 2MM JMT
CN108	87-A60-625-010		CONN,8P 2MM JMT
CN110	87-A60-625-010		CONN,8P 2MM JMT
CN117	87-A61-126-080		MALE,1P TP42097
FB101	87-A50-208-080		C-COIL,BLM11A601SPT
FB102	87-A50-208-080		C-COIL,BLM11A601SPT
FB104	87-A50-208-080		C-COIL,BLM11A601SPT
FB105	87-A50-208-080		C-COIL,BLM11A601SPT
FB106	87-A50-208-080		C-COIL,BLM11A601SPT
FB107	87-A50-208-080		C-COIL,BLM11A601SPT
FB108	87-A50-208-080		C-COIL,BLM11A601SPT
FB109	87-A50-208-080		C-COIL,BLM11A601SPT
FB110	87-A50-208-080		C-COIL,BLM11A601SPT
FB111	87-A50-208-080		C-COIL,BLM11A601SPT
FB112	87-008-372-080		FILTER, EMI BL OIRNI
FB113	87-003-223-080		FERRITE BEAD BL02RN2
FB115	87-008-372-080		FILTER, EMI BL OIRNI
FB117	87-008-372-080		FILTER, EMI BL OIRNI
FB120	87-008-372-080		FILTER, EMI BL OIRNI
FB122	87-008-372-080		FILTER, EMI BL OIRNI
FB124	87-A50-208-080		C-COIL,BLM11A601SPT
FB125	87-A50-208-080		C-COIL,BLM11A601SPT
FB126	87-A50-208-080		C-COIL,BLM11A601SPT
FB127	87-A50-208-080		C-COIL,BLM11A601SPT
FB128	87-A50-208-080		C-COIL,BLM11A601SPT
FB129	87-003-223-080		FERRITE BEAD BL02RN2
FB130	87-003-223-080		FERRITE BEAD BL02RN2
FB131	87-003-223-080		FERRITE BEAD BL02RN2
FB132	87-003-223-080		FERRITE BEAD BL02RN2
FB134	87-A50-208-080		C-COIL,BLM11A601SPT
L101	87-005-440-080		COIL,47UH FLR50
L102	87-005-440-080		COIL,47UH FLR50
L103	87-005-444-080		COIL,100UH K FLR50
W101	8A-JD1-666-010		FF-CABLE,11P 1.0 380MM 30V
W102	8A-JD1-664-010		FF-CABLE,5P 1.0 430MM 30V
W103	8A-JD1-667-010		FF-CABLE,13P 1.0 370MM 30V
W105	8A-JD1-661-010		CONN ASSY,12P V JOINT TO UNIT

SYSTEM C.B

C301	87-012-274-080		CHIP CAP,U 1000P-50B
C303	87-012-286-080		CAP, U 0.01-25
C304	87-010-831-080		C-CAP,U,0.1-16F
C305	87-010-263-080		CAP, ELECT 100-10V
C306	87-012-286-080		CAP, U 0.01-25
C307	87-010-831-080		C-CAP,U,0.1-16F
C308	87-010-263-080		CAP, ELECT 100-10V
C309	87-012-274-080		CHIP CAP,U 1000P-50B
C315	87-010-263-080		CAP, ELECT 100-10V
C316	87-010-831-080		C-CAP,U,0.1-16F
C320	87-012-286-080		CAP, U 0.01-25
C325	87-010-408-080		CAP, ELECT 47-50V
C326	87-010-408-080		CAP, ELECT 47-50V
C327	87-010-787-080		CAP, U 0.022-25
C328	87-010-263-080		CAP, ELECT 100-10V
C329	87-010-405-080		CAP, ELECT 10-50V
C330	87-012-286-080		CAP, U 0.01-25
CN301	87-009-258-010		CONN,4P V 52147 MXJ
CN302	87-099-574-010		CONN,20P TUC-P20P-B1
CN303	87-099-568-010		CONN,11P TUC-P11P-B1
CN304	87-099-567-010		CONN,10P TUC-P10P-B1
CN307	87-009-313-010		CONN 7P 51048
CN308	87-009-309-010		CONN 3P 51048
CNA305	8A-JD1-663-010		CONN ASSY,15P V PS TO SYSTEM
CNA306	8A-JD1-642-010		CONN ASSY,14P V SYSTEM TO JOIN
CNA310	8A-JD1-652-010		CONN ASSY,1P SYSTEM TO FR-JACK
FB301	87-A50-208-080		C-COIL,BLM11A601SPT
FB302	87-A50-208-080		C-COIL,BLM11A601SPT
FB303	87-A50-208-080		C-COIL,BLM11A601SPT
FB304	87-A50-208-080		C-COIL,BLM11A601SPT
FB305	87-A50-208-080		C-COIL,BLM11A601SPT
L301	87-005-436-080		COIL,22UH FLR50,K
L302	87-005-436-080		COIL,22UH FLR50,K
L303	87-005-436-080		COIL,22UH FLR50,K
W307	8A-JD1-641-010		F-CABLE,7P 2.0 440MM SYSTEM
W308	8A-JD1-643-010		F-CABLE,3P 2.0 220MM SYSTEM
X301	87-008-394-080		CERAMIC FILTER,
X302	87-008-394-080		CERAMIC FILTER,

PS-2 C.B

⚠ C212	87-012-370-010		CAP,CER 3300P-250NS
⚠ C213	87-012-370-010		CAP,CER 3300P-250NS
C215	87-010-386-080		CAP,E 330-25 M SME
C217	87-A11-196-080		CAP,M/P 0.022-400 K MMC
C218	87-A12-408-080		CAP,E 100-35 KMF
C219	87-010-190-080		C-CAP,S 0.01-50 ZF
C220	87-A11-794-080		CAP,CER 100P-2K K B
C222	87-010-190-080		C-CAP,S 0.01-50 ZF
C224	87-A10-493-080		CAP,E 1000-25 KMF
C225	87-A10-011-090		CAP, E 2200-25 SMG
C226	87-010-247-080		CAP, ELECT 100-50V
C227	87-010-401-080		CAP, ELECT 1-50V
C228	87-A10-646-090		CAP,E 220-400 SMH25.4*40
C229	87-010-247-080		CAP, ELECT 100-50V
C230	87-010-247-080		CAP, ELECT 100-50V
C231	87-A10-492-090		CAP,E 3300-10 KMF
C232	87-010-381-080		CAP, ELECT 330-16V
C233	87-010-247-080		CAP, ELECT 100-50V
C234	87-010-221-080		CAP, ELECT 470-10V
C237	87-010-247-080		CAP, ELECT 100-50V
⚠ C241	87-012-370-010		CAP,CER 3300P-250NS

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
⚠ C242	87-012-370-010		CAP,CER 3300P-250NS
C244	87-A10-831-080		CAP,E 1000-25 M SMG
⚠ C245	87-A10-374-010		CAP,M/P 0.1-275 K RMR
CN211	87-A60-937-010		CONN,2P V VH
CN216	87-A60-632-010		CONN,15P V 2MM JMT
CNA214	8A-JD1-660-010		CONN ASSY,15P V PS TO JOINT
FB211	87-003-223-080		FERRITE BEAD BL02RN2
⚠ ICF211	87-A91-337-080		PROTECTOR,IC ICP-N75
⚠ ICF212	87-001-132-080		ICP-N38
⚠ ICF213	87-A91-337-080		PROTECTOR,IC ICP-N75
⚠ ICF214	87-001-132-080		ICP-N38
⚠ ICF215	87-001-132-080		ICP-N38
⚠ ICF216	87-001-486-080		PROTECTOR,IC ICP-N15
L211	87-A50-193-080		COIL,10UH K LHL10
L212	87-A50-193-080		COIL,10UH K LHL10
L213	87-A50-444-080		COIL,22UH K LHL08
⚠ LF211	87-A90-492-010		FLTR,18MH SS10V-05180
⚠ PS211	87-A90-717-010		P-COUPLER,PC123FY2
⚠ PT211	8A-JD1-651-010		PT, AJD-1 SWT
R213	87-A00-558-090		RES,M/F 56K-2W J
R216	87-022-565-090		RES,M/O 47K-1W J
R217	87-022-565-090		RES,M/O 47K-1W J
R224	87-A00-765-090		RES,M/F 0.30-2W J
R228	87-A00-279-080		RES,M/F 75-1/6W F
R229	87-025-365-080		RES,M/F 680-1/6WJ F
R230	87-025-365-080		RES,M/F 680-1/6WJ F
R245	87-029-132-090		RESTOR FUSE 4.7-1/4W
R250	87-029-374-010		RES,FUSE 47-1/4W
R258	87-A00-149-090		RES,M/F 100-1W RSF(S)

PS-SW C.B

⚠ C201	87-A10-688-090		CAP,M/P 0.22-275 K (B81133)
⚠ C202	87-A10-688-090		CAP,M/P 0.22-275 K (B81133)
⚠ C203	87-A10-479-080		CAP,CER 2200-250 M E KH
⚠ C204	87-A10-479-080		CAP,CER 2200-250 M E KH
⚠ C205	87-A10-479-080		CAP,CER 2200-250 M E KH
⚠ C206	87-A10-479-080		CAP,CER 2200-250 M E KH
⚠ CN201	87-099-674-010		CONN,2P VA V
⚠ CN202	87-A61-126-080		MALE, 1P TP42097
⚠ CN203	87-A60-003-010		CONN,2P V TBL-P BOSS
CN204	87-A61-126-080		MALE, 1P TP42097
⚠ D201	8Z-JBH-606-010		VRIS,TNR15G271K
⚠ F201	87-A91-106-010		FUSE,5A 125V T SER233
⚠ FC201	87-033-213-080		CLAMP, FUSE
⚠ FC202	87-033-213-080		CLAMP, FUSE
⚠ LF201	87-A91-453-010		FLTR,LINE PLH10A7003R6P02B1
⚠ LF202	87-A91-449-010		FLTR,LINE ELF18D450D
⚠ R202	87-023-102-080		RES,SD 4.7M 1/2W SF
⚠ S201	87-A91-410-010		SW,AC PUSH 1-1-1 ESB92SH1B

FR-JACK C.B

C68	87-010-178-080		CHIP CAP 1000P
C69	87-010-178-080		CHIP CAP 1000P
C70	87-012-286-080		CAP, U 0.01-25
CN2	8A-JD1-676-010		CONN ASSY,8P V FR-J TO JIONT
CN8	87-009-257-010		CONN 3P 52147 MXJ
CN9	87-A61-126-080		MALE, 1P TP42097
CN13	87-A61-126-080		MALE, 1P TP42097
CNA1	8A-JD1-662-010		CONN ASSY,7P V FR-JACK TO TV
J1	87-A61-296-010		JACK,PIN 3P +S ALL GOLD YKC22-
J3	87-A60-420-010		JACK,3.5 ST (MSC)
R70	87-A00-667-090		RES,M/F 680-2W J RSF(S)
R71	87-A00-667-090		RES,M/F 680-2W J RSF(S)

FR-FL C.B

C712	87-010-560-040		CAP,E 10-50 M 5L MA
C713	87-010-560-040		CAP,E 10-50 M 5L MA
C715	87-010-550-040		CAP,E 100-6.3 M 5L MA
C716	87-010-831-080		C-CAP,U,0.1-16F
CN701	87-099-556-010		CONN,10P TUC-P10X-B1
CN702	87-099-557-010		CONN,11P TUC-P11X-B1
CN703	87-099-563-010		CONN,20P TUC-P20X-B1
D701	87-002-738-080		LED,SEL2210R TP6
FL701	88-NF9-630-010		FL,10-BT-207GK
L701	87-003-147-080		COIL, 22UH
S701	87-A90-164-080		SW,TACT SKQAB(N)
S702	87-A90-164-080		SW,TACT SKQAB(N)
S703	87-A90-164-080		SW,TACT SKQAB(N)
S704	87-A90-164-080		SW,TACT SKQAB(N)
S705	87-A90-164-080		SW,TACT SKQAB(N)
S711	87-A90-164-080		SW,TACT SKQAB(N)
S712	87-A90-164-080		SW,TACT SKQAB(N)
S713	87-A90-164-080		SW,TACT SKQAB(N)
S714	87-A90-164-080		SW,TACT SKQAB(N)
S715	87-A90-164-080		SW,TACT SKQAB(N)
S716	87-A90-164-080		SW,TACT SKQAB(N)
S717	87-A90-164-080		SW,TACT SKQAB(N)

OPT C.B

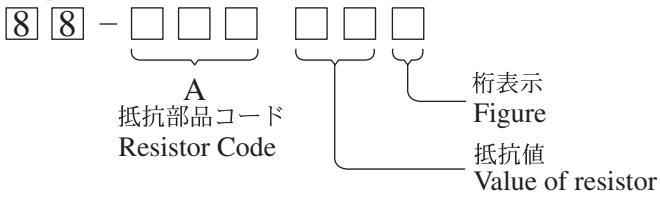
C654	87-012-286-080		C-CAP,U 0.01-25
C655	87-010-382-080		CAP, ELECT 22-25V
CN650	87-099-416-010		CONN,3P H WHT EH
W650	8A-JD1-665-010		CONN ASSY,3P V UNIT TO OPT

FR-KEY C.B

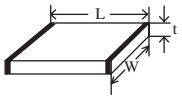
CN801	87-009-310-010		CONNECTOR, 4P
D801	87-001-161-080		LED SEL2410E
S801	87-A90-164-080		SW,TACT SKQAB(N)
S802	87-A90-164-080		SW,TACT SKQAB(N)
S803	87-A90-164-080		SW,TACT SKQAB(N)
S804	87-A90-164-080		SW,TACT SKQAB(N)
S805	87-A90-164-080		SW,TACT SKQAB(N)
S806	87-A90-164-080		SW,TACT SKQAB(N)
S807	87-A90-164-080		SW,TACT SKQAB(N)
S808	87-A90-164-080		SW,TACT SKQAB(N)
W801	8A-JD1-640-010		F-CABLE,4P 2.0 150MM FR-KEY

○チップ抵抗部品コード／CHIP RESISTOR PART CODE

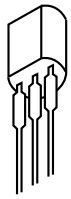
チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding



チップ抵抗
Chip resistor

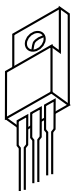
容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法／Dimensions (mm) 外形／Form	L	W	t	抵抗コード　：A Resistor Code：A
1/16W	1005	±5%	CJ		1.0	0.5	0.35	104
1/16W	1608	±5%	CJ		1.6	0.8	0.45	108
1/10W	2125	±5%	CJ		2	1.25	0.45	118
1/8W	3216	±5%	CJ		3.2	1.6	0.55	128

TRANSISTOR ILLUSTRATION



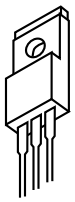
E C B

2SA1091-0
2SC1815GR
2SC2482



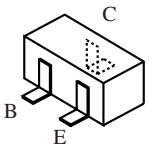
B C E

2SC5147D



B C E

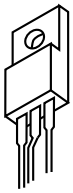
2SA1837
2SC4793
2SD2531



2SA1037K
2SC2412KR
KRC104S
DTA114EK
DTC114EK
KRA104S

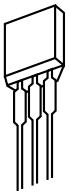
E C B

2SA1015Y



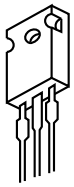
B C E

2SD2578-CA



E C B

2SA933SRS 2SD774
2SA1175FE DTA114ES
2SC1740SRS DTA144ES
2SC2785FE DTC144ES

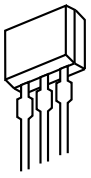


E C B

2SB1436(R)

B C E

2SC1741AS(R)



B C E

2SB1237(Q)

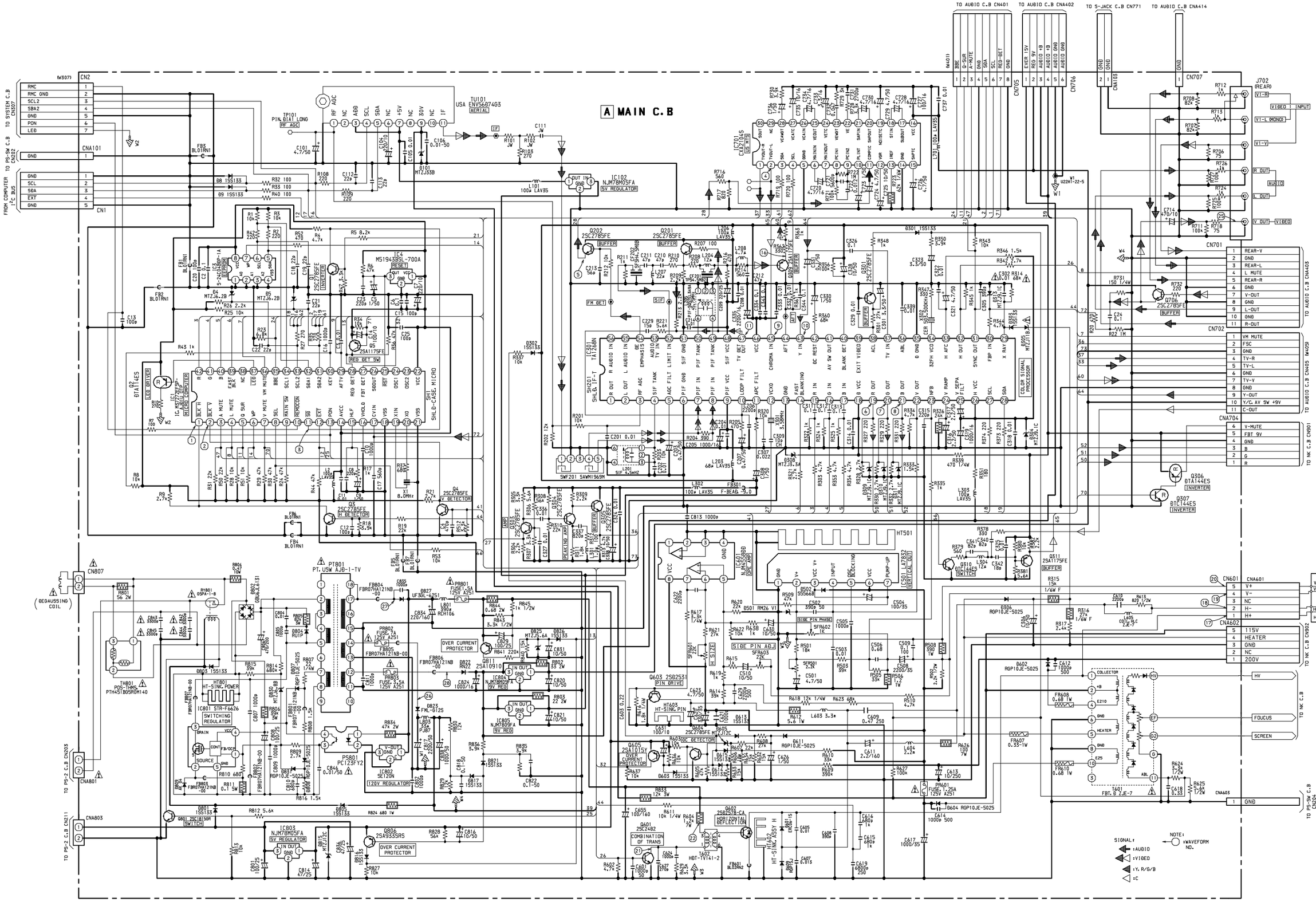
32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

A B C D E F G H I J K L M N O P Q R S T U

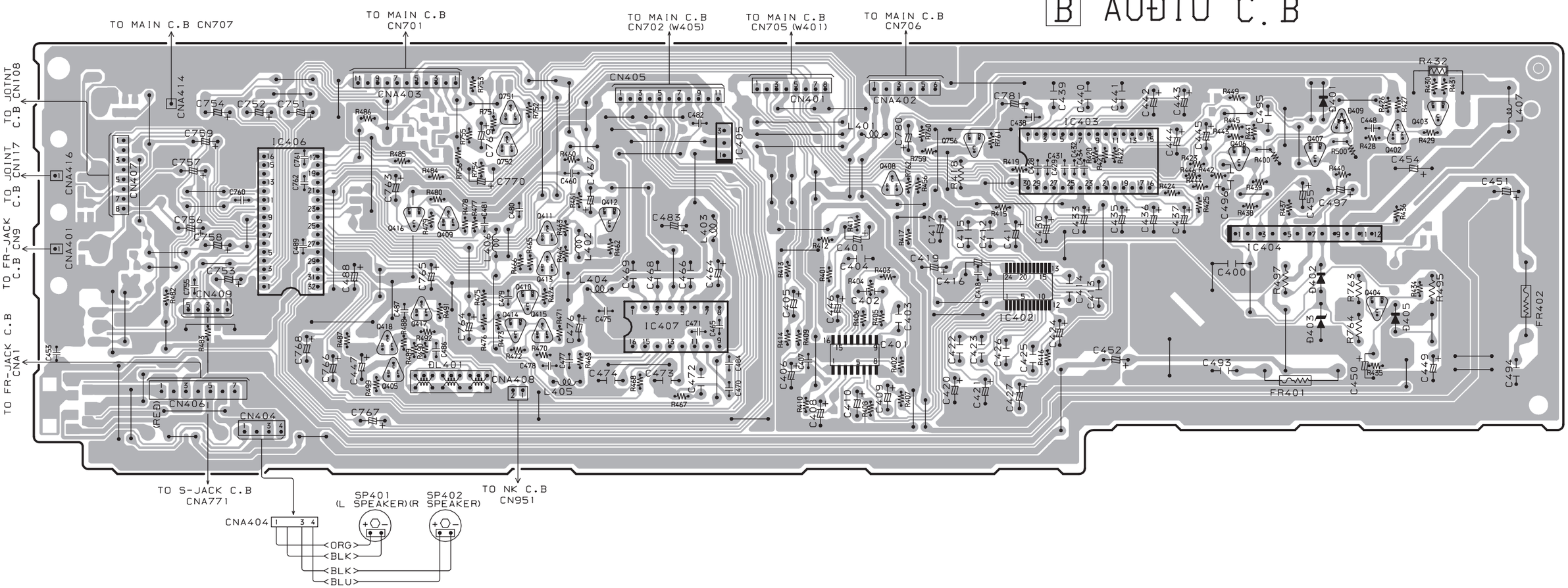
A MAIN C.B

TO PS-2 C.B CN211
TO PS-SW CN203
(DEGAUSSING COIL)
TO CN807
TO SP-SW C.B CN204
CNA603
T601
ANODE CAP
TO V901 CRT
<WHT>>FOCUS
<RED>>SCREEN
TO NK C.B
CNA801
(RED) (BLK)
CNA803
TH801
RY801
CN807
IC801
IC802
PS801
PT801
Q811
L801
IC803
IC601
IC804
IC805
IC1
IC3
IC4
Q806
Q307
Q601
Q602
HT602
T602
L803
L303
L403
L604
L605
PR802
PR803
FB805
FB801
CNA601
(BY UNIT)
TO CN601
CNA602
TO NK C.B CN902
J702
J702 (REAR)
V1-R
V1-L (MONO)
R OUT
L OUT
V-OUT
V1-V
VIDEO 1 INPUT
AUDIO
VIDEO
VIDEO INPUT
TO AUDIO C.B CNA403
TO S-JACK C.B CN771
CNA103
(MARK)
IC102
TU101
AERIAL
CN701
IC701
IC301
CNA704
SFR603
SFR501
SFR601
SFR602
CN601
CN501
CN502
CN503
CN504
CN505
CN506
CN508
CN509
CN510
W600
W1
W2
W3
W4
CLP1
CLP2
CLP3
CLP4
CLP5
CLP7
TO AUDIO C.B CNA414
CN707
CN2 (MARK)
TO SYSTEM C.B CN307 (W307)
CN702
TO AUDIO C.B CN405 (W405)
CN705
TO AUDIO C.B CN401 (W401)
CN706
TO AUDIO C.B CNA402
TO NK C.B CN901
FROM COMPUTER I²C BUS
TO PS-SW C.B CN202
CNA101
CN1

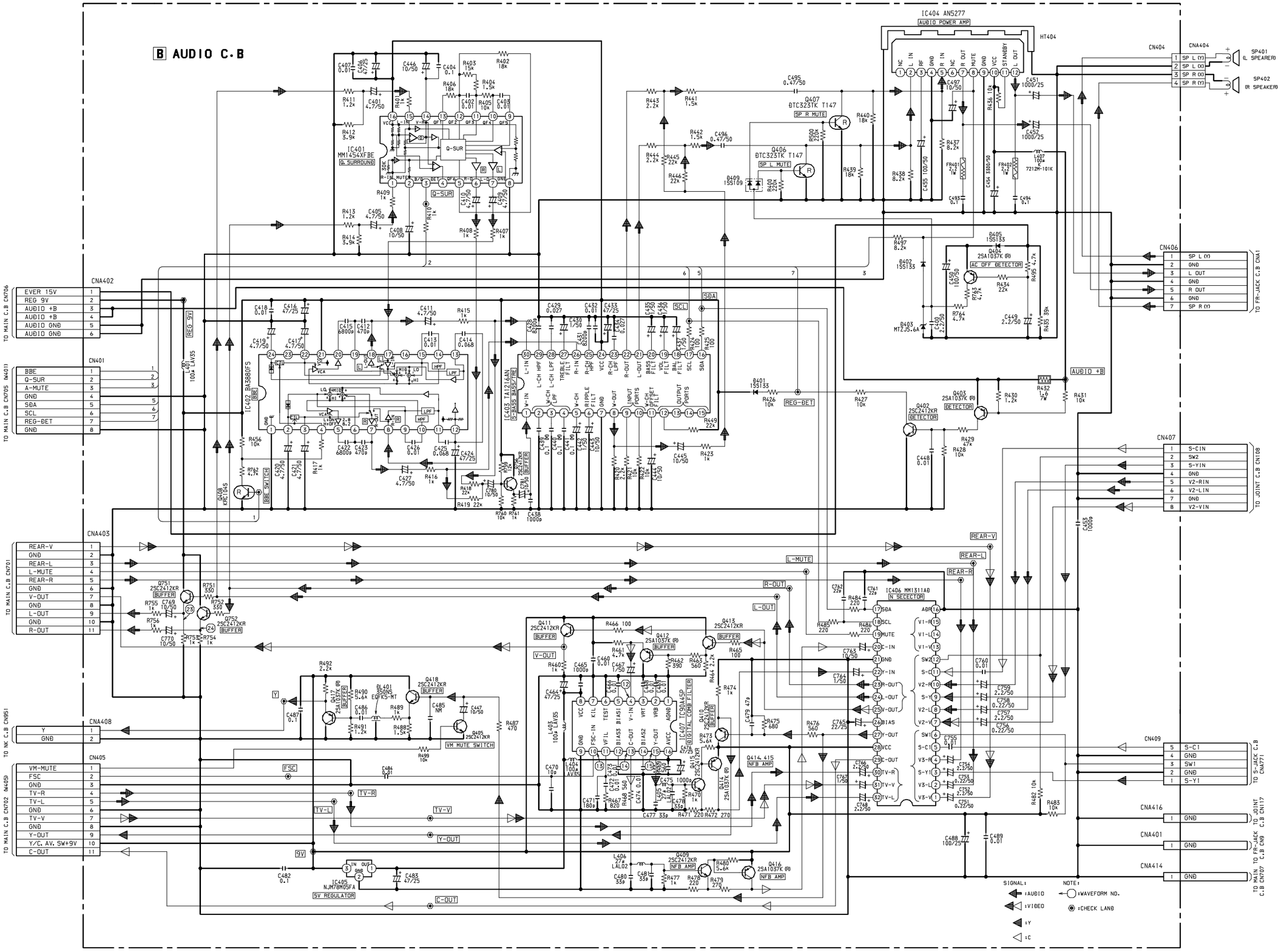
SCHEMATIC DIAGRAM – 1 (MAIN)

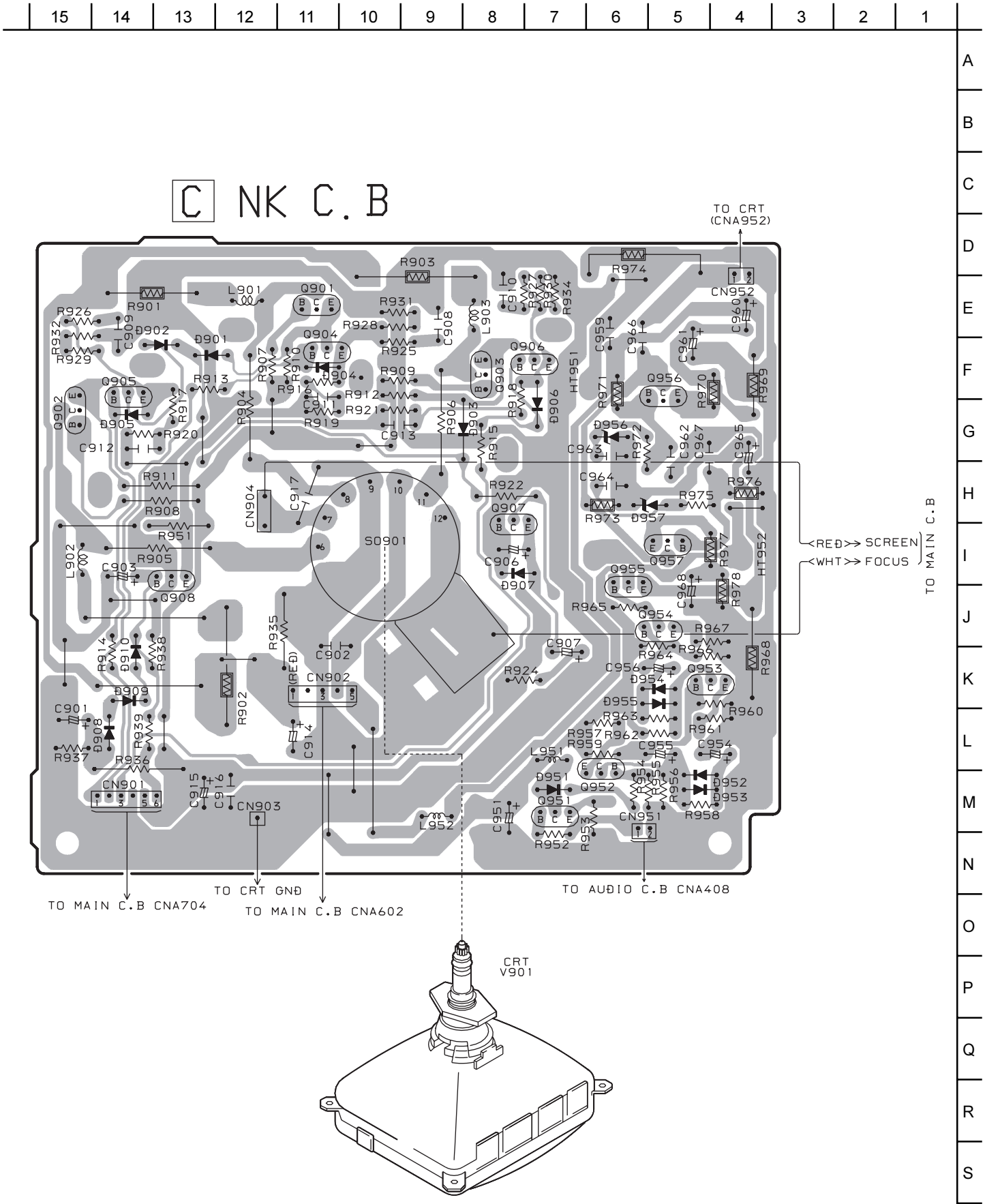


B AUDIO C.B

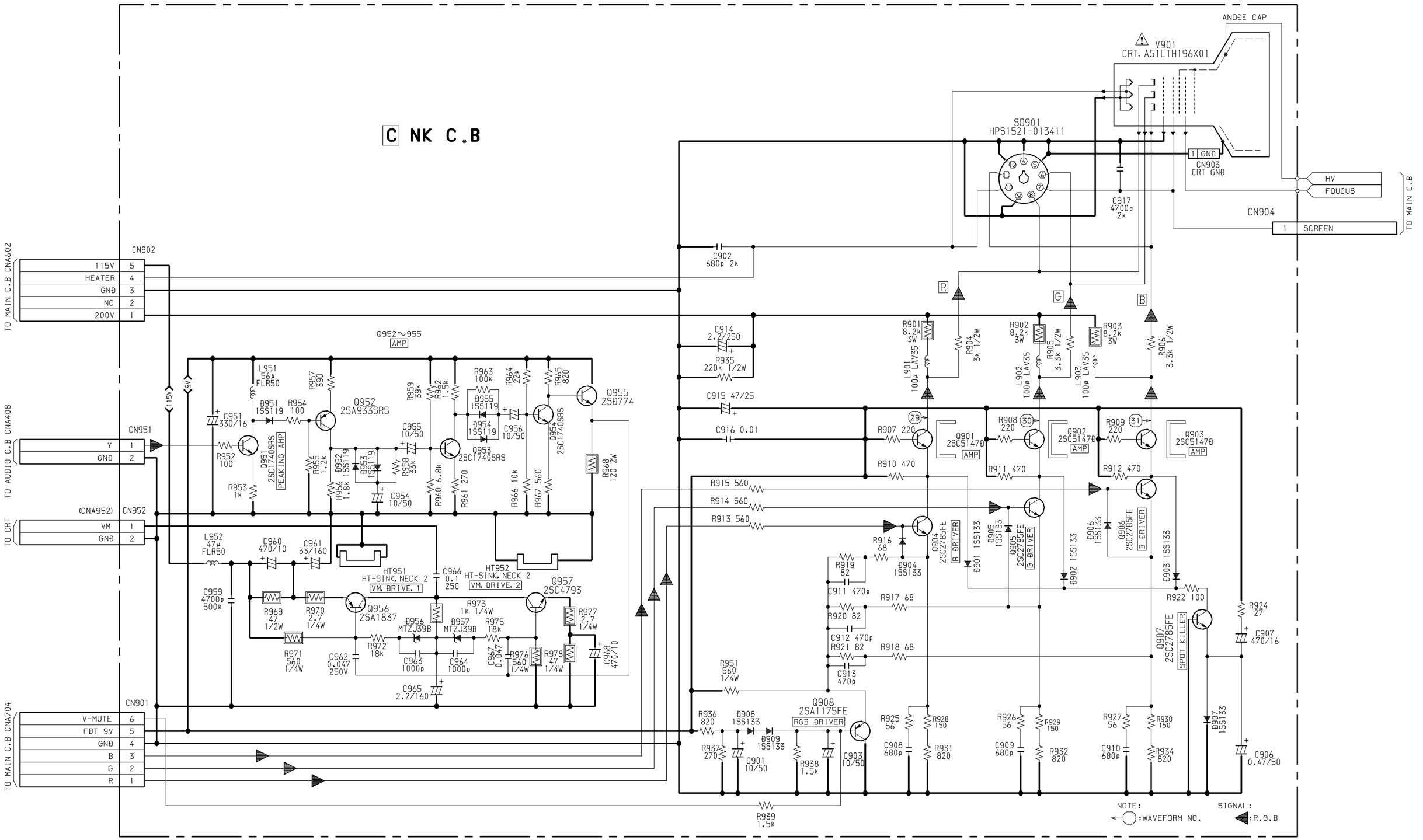

TO MAIN C.B CN707
TO MAIN C.B CN701
TO MAIN C.B CN702 (W405)
TO MAIN C.B CN705 (W401)
TO MAIN C.B CN706
TO JOINT C.B CN108
TO JOINT C.B CN117
TO FR-JACK C.B CN9
TO FR-JACK C.B CNA1
TO S-JACK C.B CNA771
TO NK C.B CN951
SP401 (L SPEAKER)
SP402 (R SPEAKER)
CNA404
<ORG>
<BLK>
<BLK>
<BLU>
CNA414
CNA403
CN405
CN401
CNA402
CNA416
CN407
CNA401
CN409
CN406
(RED)
CN404
CNA408
IC406
IC405
IC407
IC403
IC404
IC402
IC401
DL401
FR401
FR402

SCHEMATIC DIAGRAM – 2 (AUDIO)




C NK C.B
TO CRT (CNA952)
TO MAIN C.B CNA704
TO CRT GND
TO MAIN C.B CNA602
TO AUDIO C.B CNA408
TO MAIN C.B
RED >> SCREEN
WHT >> FOCUS
CRT V901
CN901
CN902
CN903
CN904
CN951
CN952
S0901
HT951
HT952

SCHEMATIC DIAGRAM – 3 (NK)

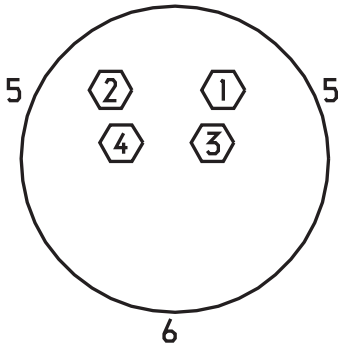


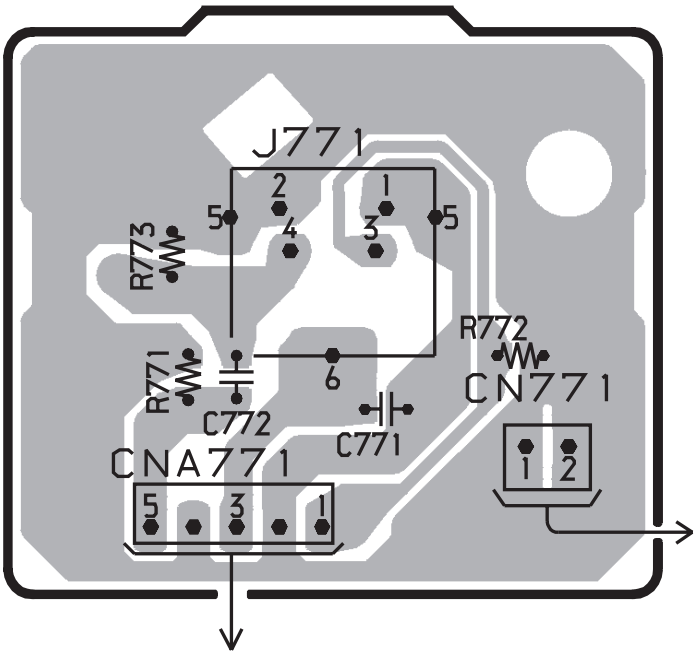
15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

A B C D E F G H I J K L M N O P Q R S T U

Ð S-JACK C.B

J771
VIÐEO 1 INPUT
S-VIÐEO

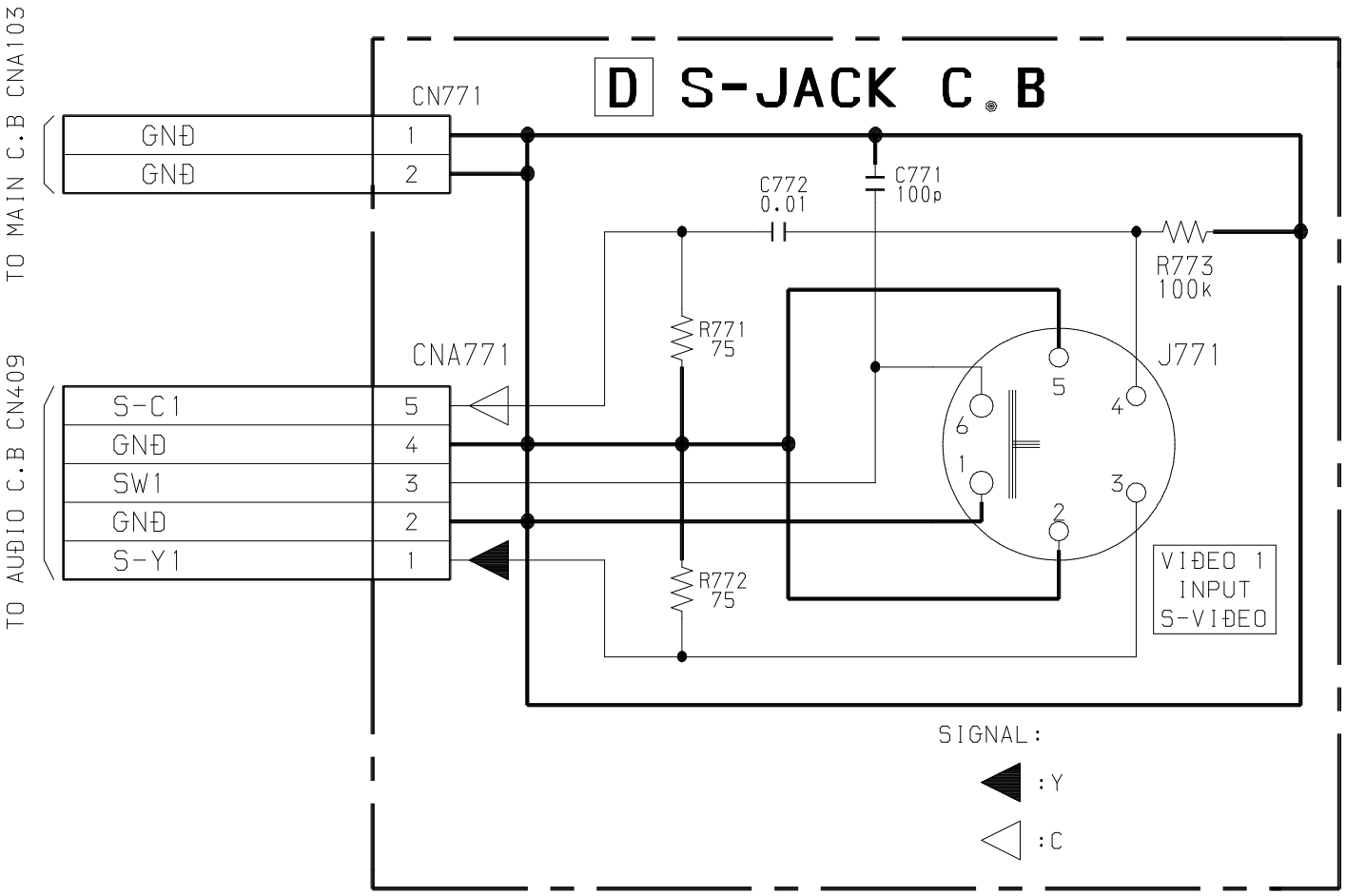




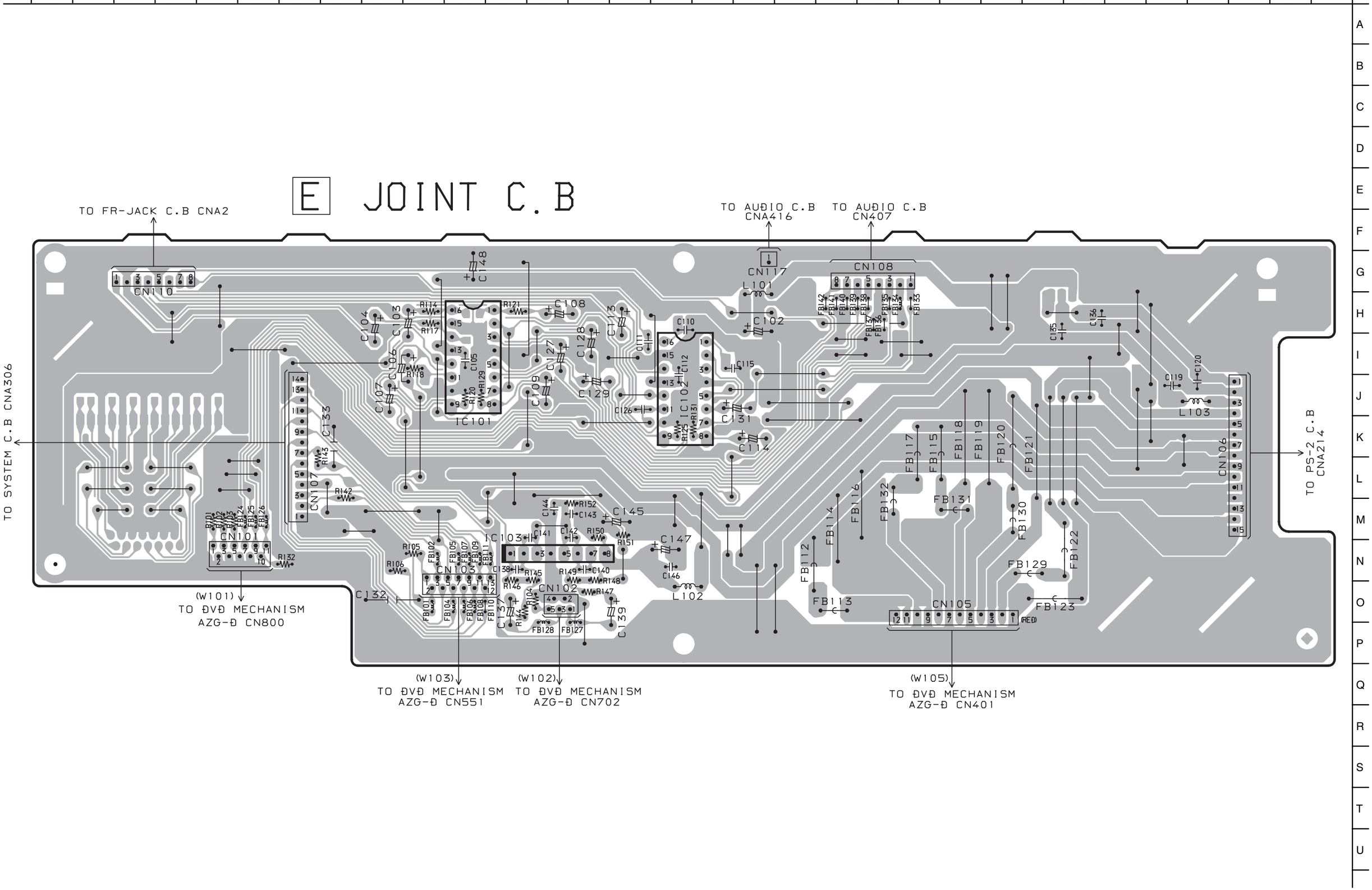
TO AUÐIO C.B CN409

TO MAIN C.B CNA103

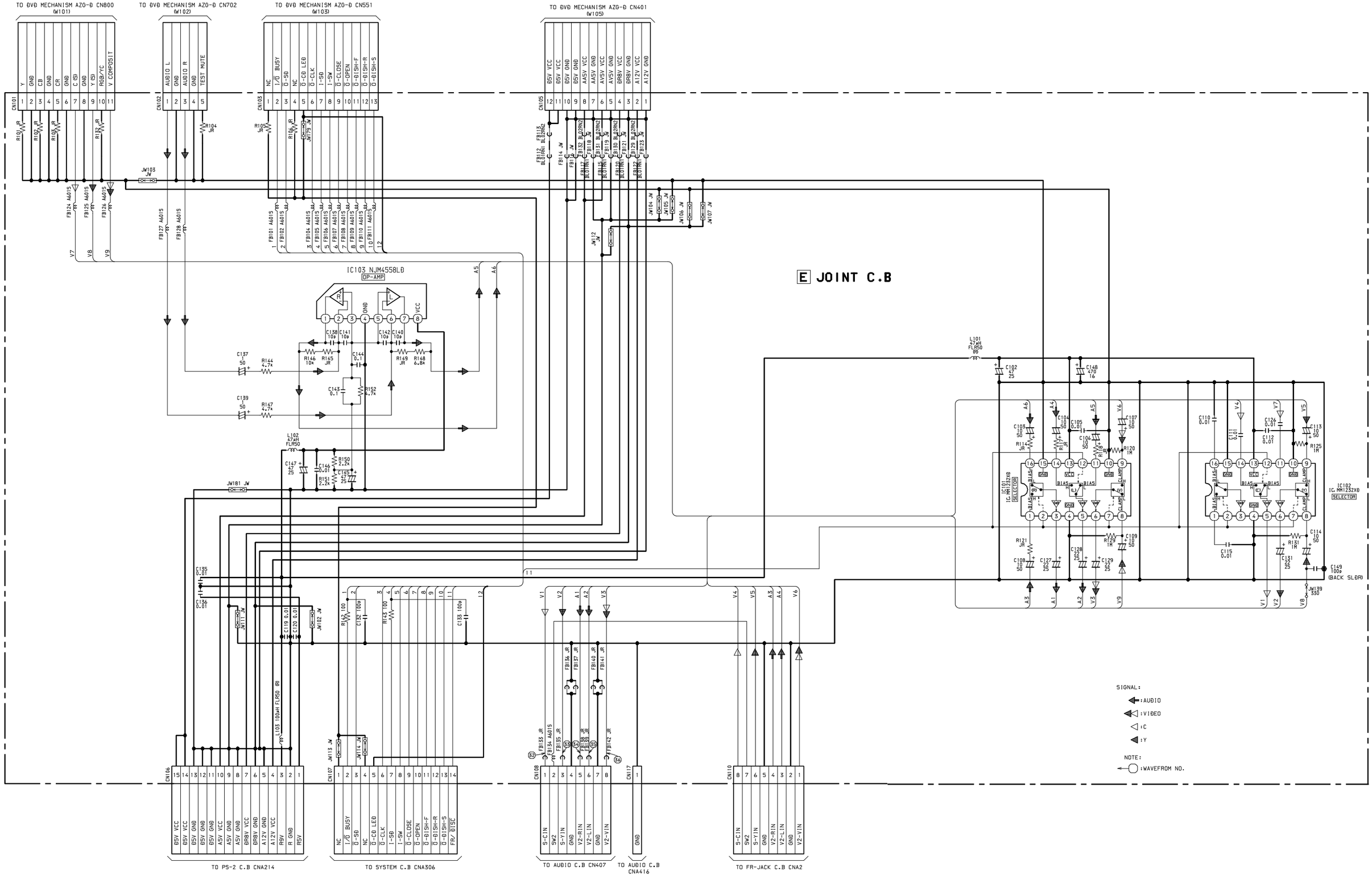
SCHEMATIC DIAGRAM – 4 (S-JACK)



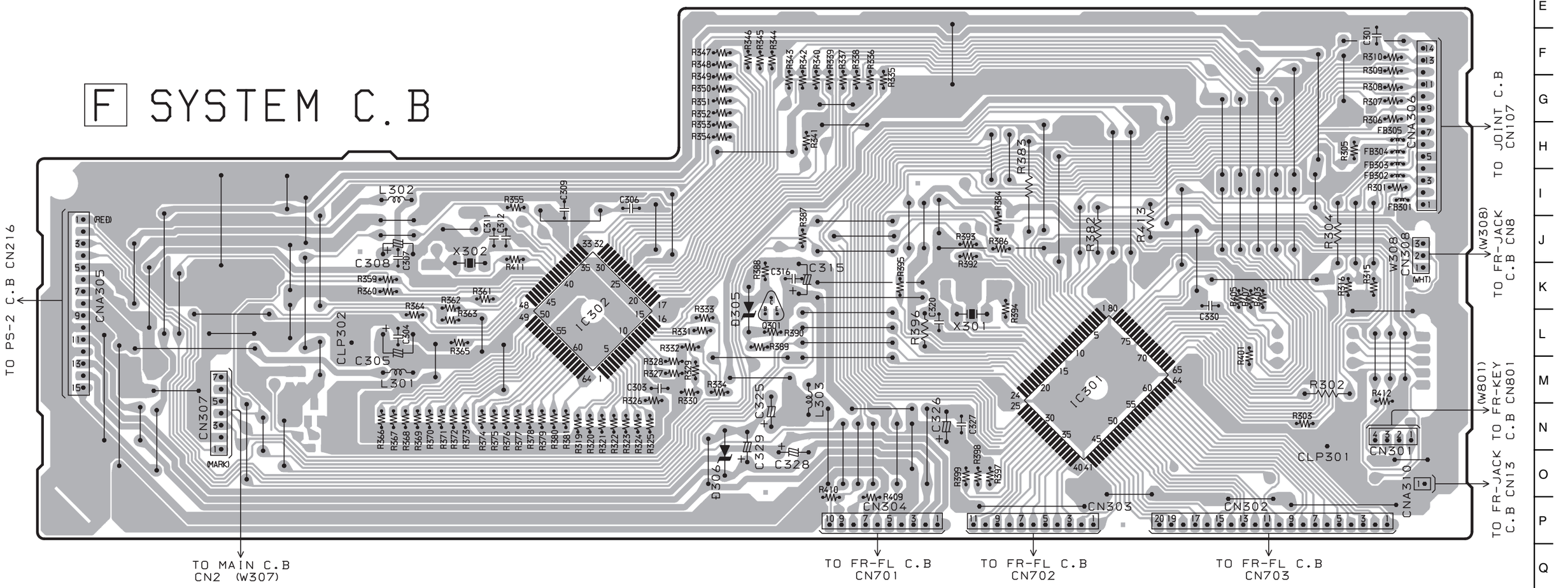
E JOINT C.B


TO FR-JACK C.B CNA2
TO AUDIO C.B CNA416
TO AUDIO C.B CN407
TO SYSTEM C.B CNA306
TO PS-2 C.B CNA214
CN110
CN117
CN108
L101
C102
IC101
IC102
IC103
CN101
CN103
CN102
CN107
CN106
CN105
L102
L103
(W101) TO DVD MECHANISM AZG-D CN800
(W103) TO DVD MECHANISM AZG-D CN551
(W102) TO DVD MECHANISM AZG-D CN702
(W105) TO DVD MECHANISM AZG-D CN401

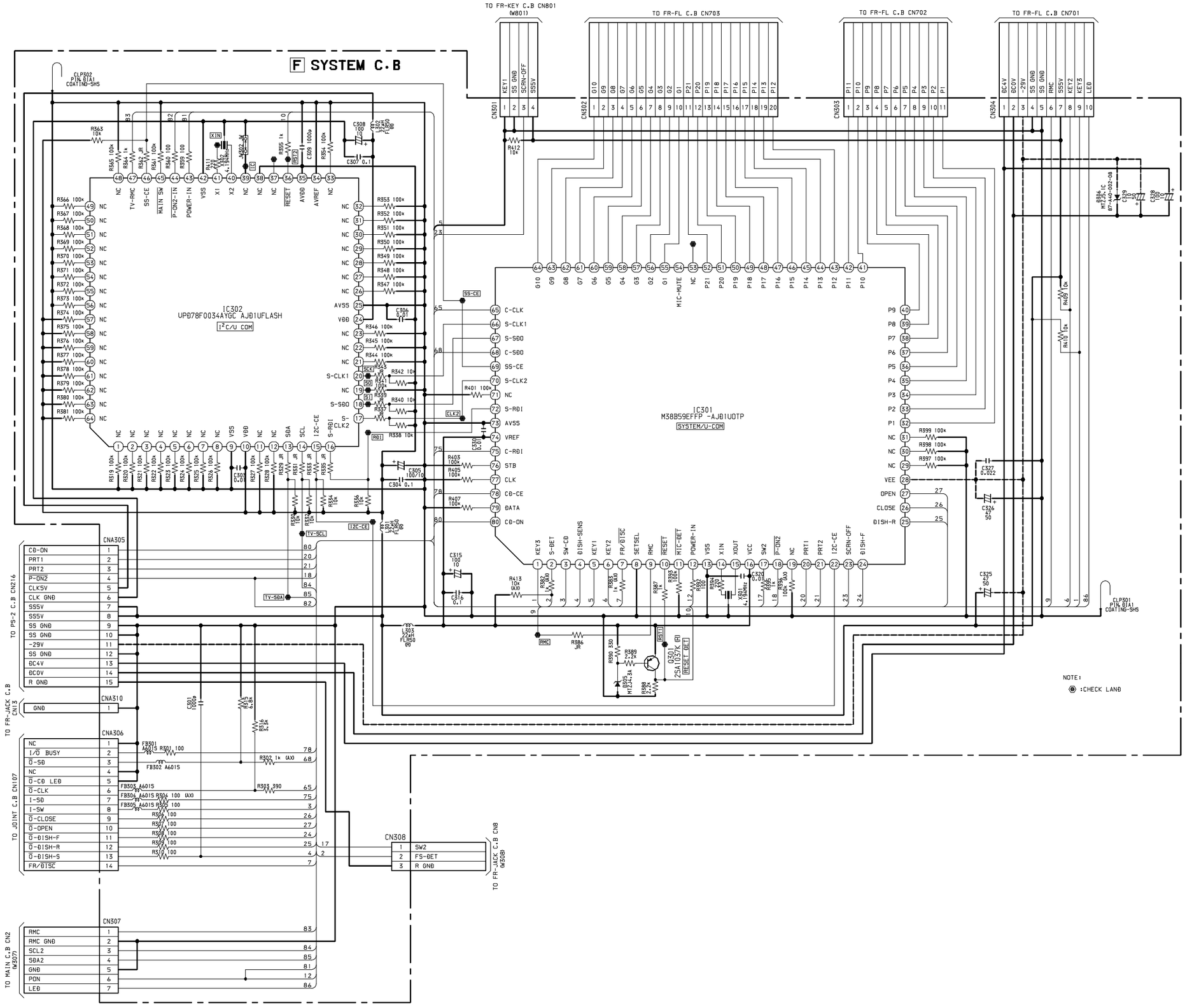
SCHEMATIC DIAGRAM – 5 (JOINT)


TO ĐVĐ MECHANISM AZG-Đ CN800 (W101)
TO ĐVĐ MECHANISM AZG-Đ CN702 (W102)
TO ĐVĐ MECHANISM AZG-Đ CN551 (W103)
TO ĐVĐ MECHANISM AZG-Đ CN401 (W105)
CN101 Y GND CB GND CR GND C (S) GND Y (S) RGB/VC V COMPOSIT
CN102 AUDIO L GND AUDIO R GND TEST MUTE
CN103 NC I/O BUSY O-SD NC O-CD LED O-CLK I-SD I-SW O-CLOSE O-OPEN O-DISH-F O-DISH-R O-DISH-S
CN105 DSV VCC DSV VCC DSV GND DSV GND AA5V VCC AA5V GND AV5V VCC AV5V GND DRBV VCC DRBV GND A12V VCC A12V GND
E JOINT C.B
IC103 NJM4558LĐ
OP-AMP
GND VCC
IC101 IC MM1232X0 SELECTOR
IC102 IC MM1232X0 SELECTOR
L101 47uH FLR50 Đ9
L102 47uH FLR50
L103 100uH FLR50 Đ9
SIGNAL:
:AUĐIO
:VIĐEO
:C
:Y
NOTE:
:WAVEFROM NO.
CN106 DSV VCC DSV VCC DSV GND DSV GND DSV GND A5V VCC A5V GND A5V GND DRBV VCC DRBV GND A12V GND A12V VCC A9V A GND A5V
CN107 NC I/O BUSY O-SD NC O-CD LED O-CLK I-SD I-SW O-CLOSE O-OPEN O-DISH-F O-DISH-R O-DISH-S FRJ DISC
CN108 S-CIN SW2 S-YIN GND V2-RIN V2-LIN GND V2-VIN
CN117 GND
CN110 S-CIN SW2 S-YIN GND V2-RIN V2-LIN GND V2-VIN
TO PS-2 C.B CNA214
TO SYSTEM C.B CNA306
TO AUĐIO C.B CN407
TO AUĐIO C.B CNA416
TO FR-JACK C.B CNA2

F SYSTEM C.B


TO PS-2 C.B CN216
CNA305
CN307
(MARK)
TO MAIN C.B
CN2 (W307)
TO FR-FL C.B
CN701
TO FR-FL C.B
CN702
TO FR-FL C.B
CN703
TO FR-JACK C.B CN8
TO JOINT C.B CN107
(W308)
CN308
(WHT)
CNA306
TO FR-KEY C.B CN801
(W801)
CN301
CNA310
TO FR-JACK C.B CN13
IC301
IC302
X301
X302
L301
L302
L303
CLP301
CLP302
CN302
CN303
CN304
D305
D306
Q301

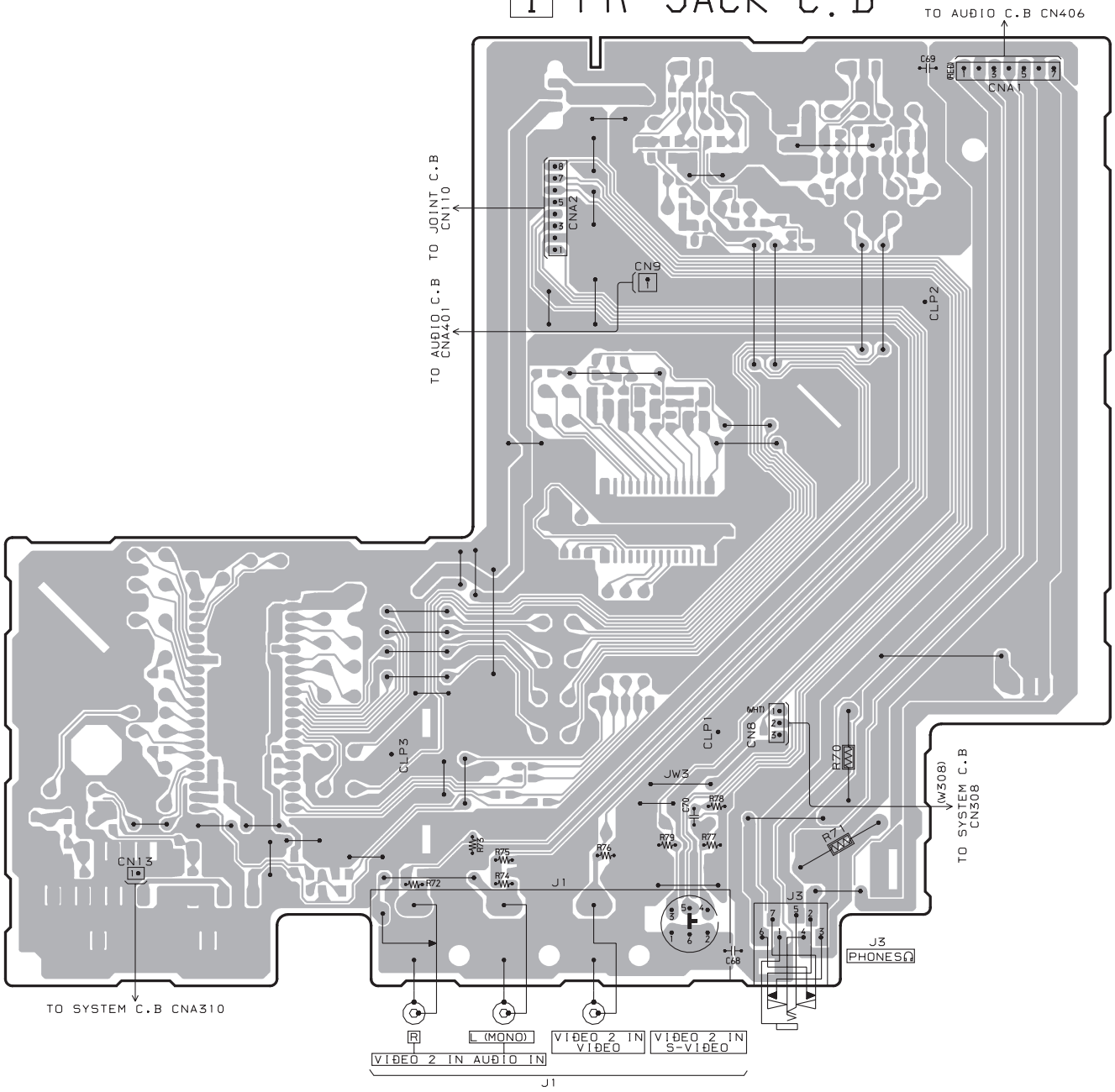
SCHEMATIC DIAGRAM – 6 (SYSTEM)



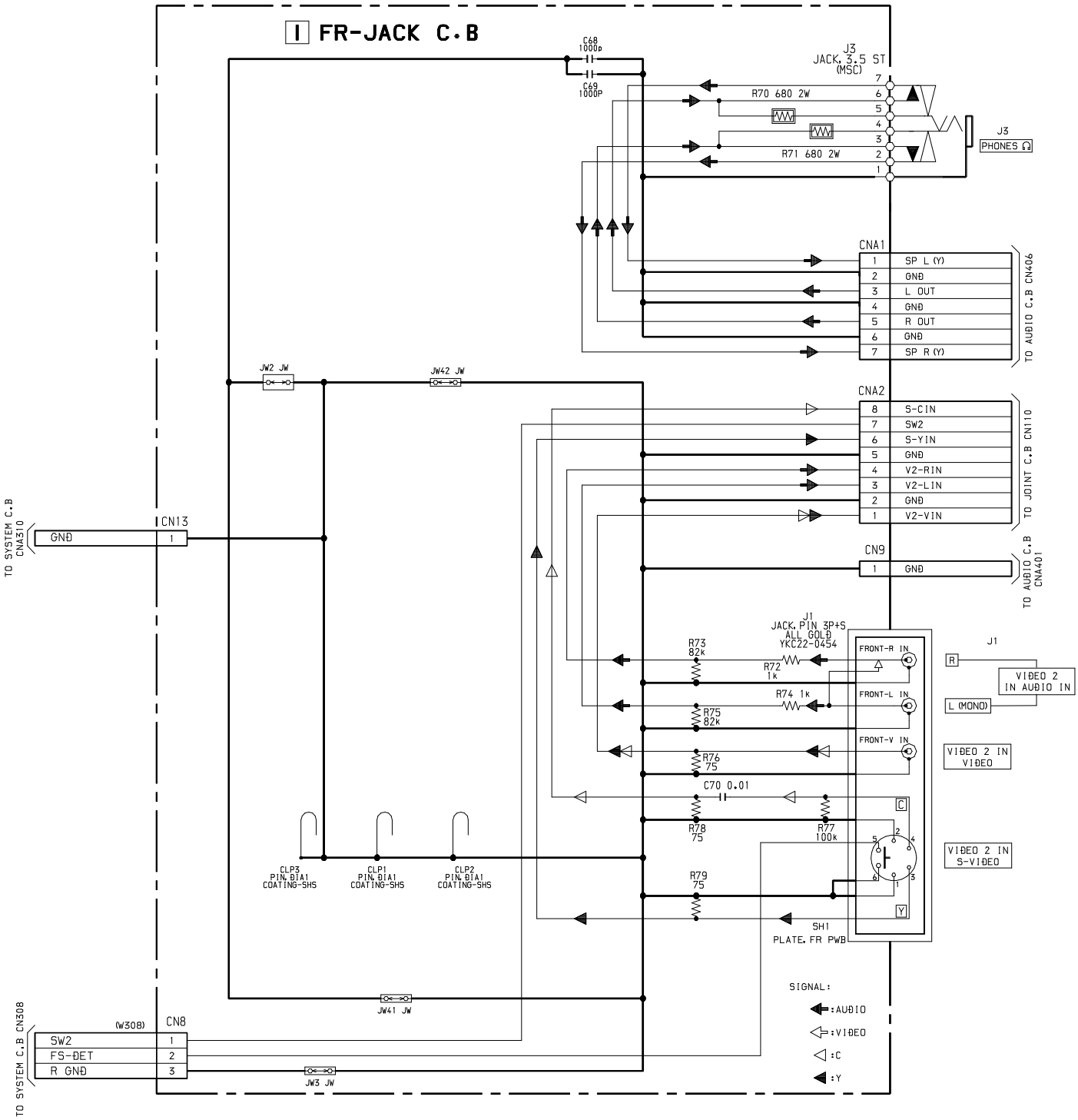
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1

A B C D E F G H I J K L M N O P Q R S T U

I FR-JACK C.B



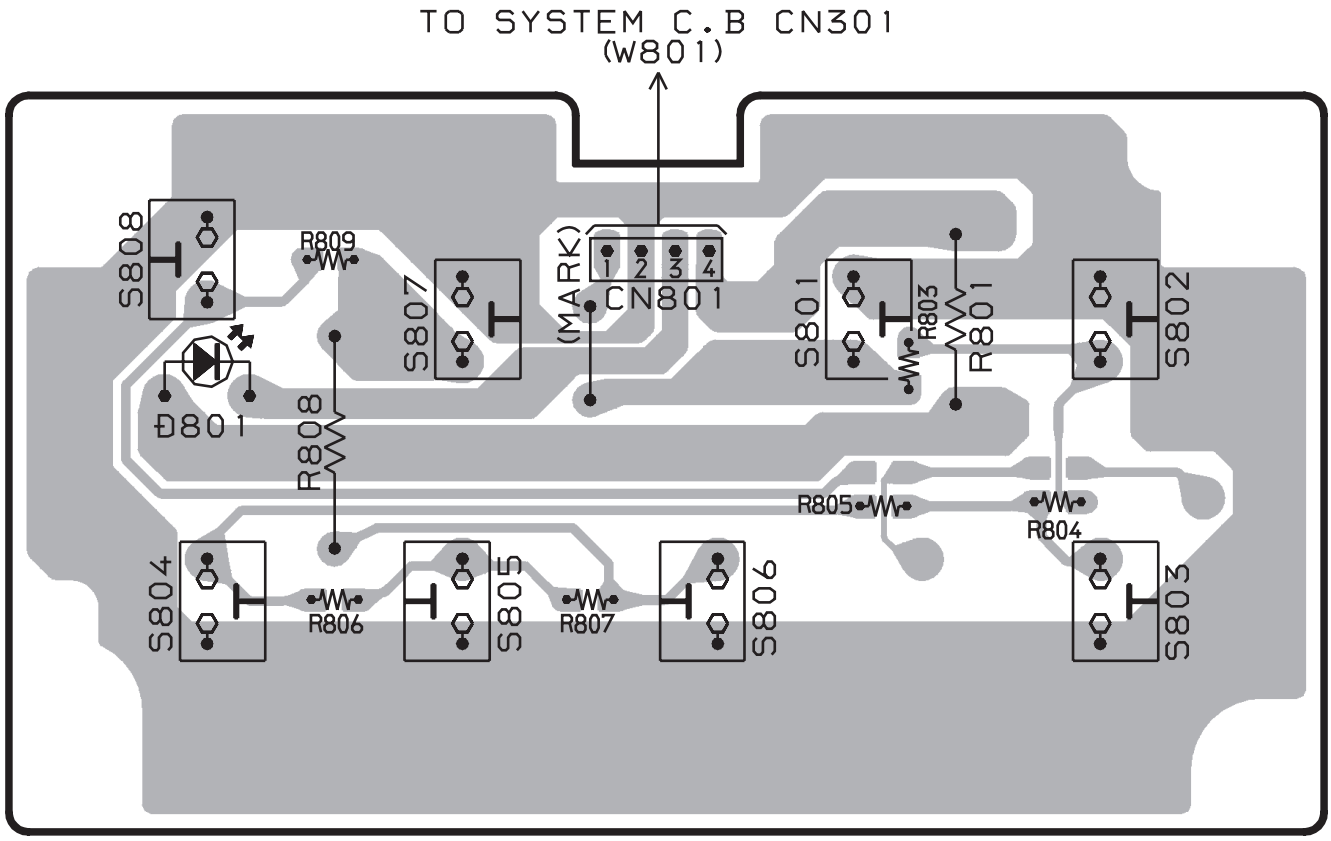
SCHEMATIC DIAGRAM – 7 (FR-JACK)



15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

A B C D E F G H I J K L M N O P Q R S T U

L FR-KEY C.B



S808, Đ801 SCREEN OFF

S807 PBC

S801 TV/VIĐEO

S802 ĐISC

S804 ĐISC 1

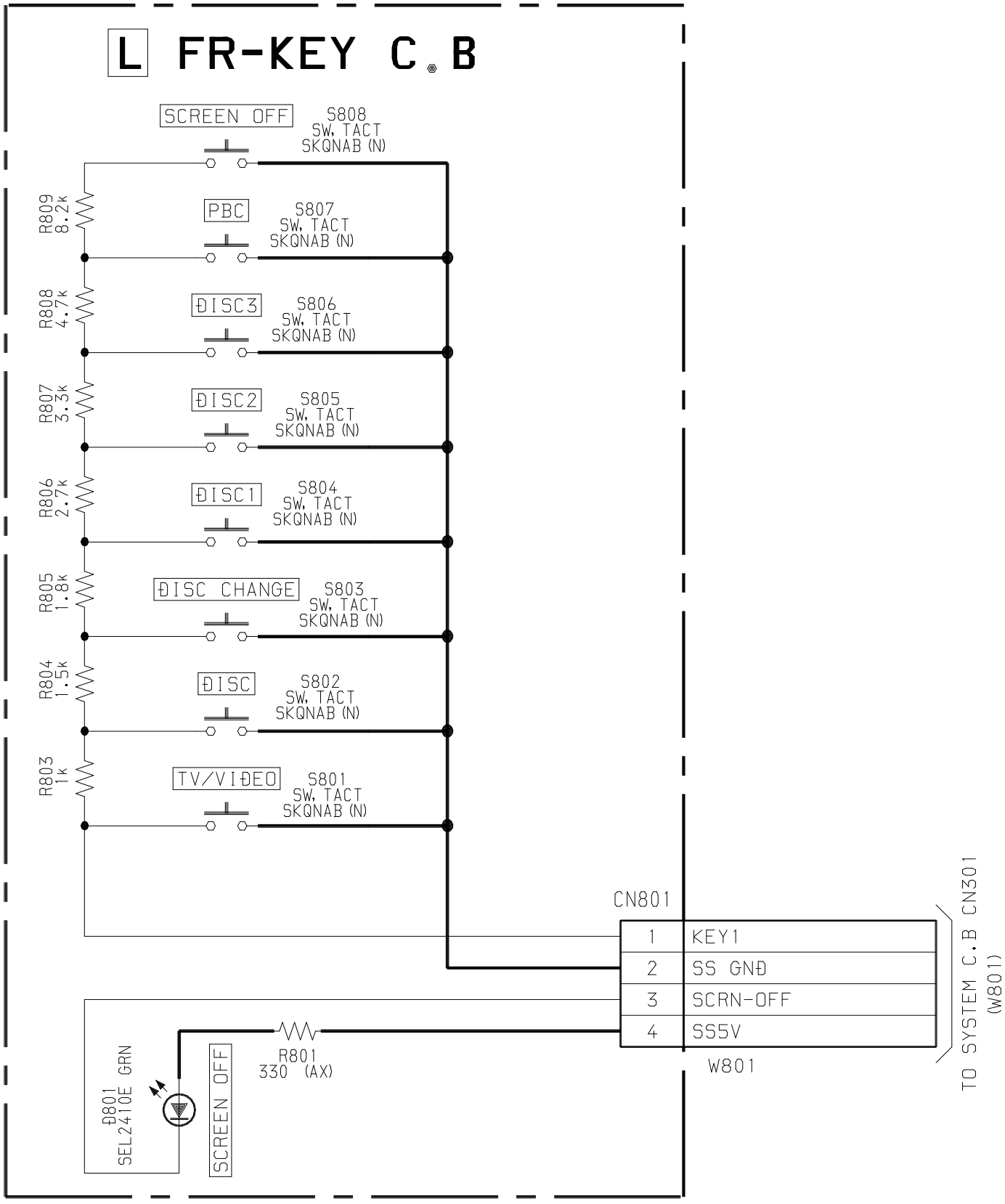
S805 ĐISC 2

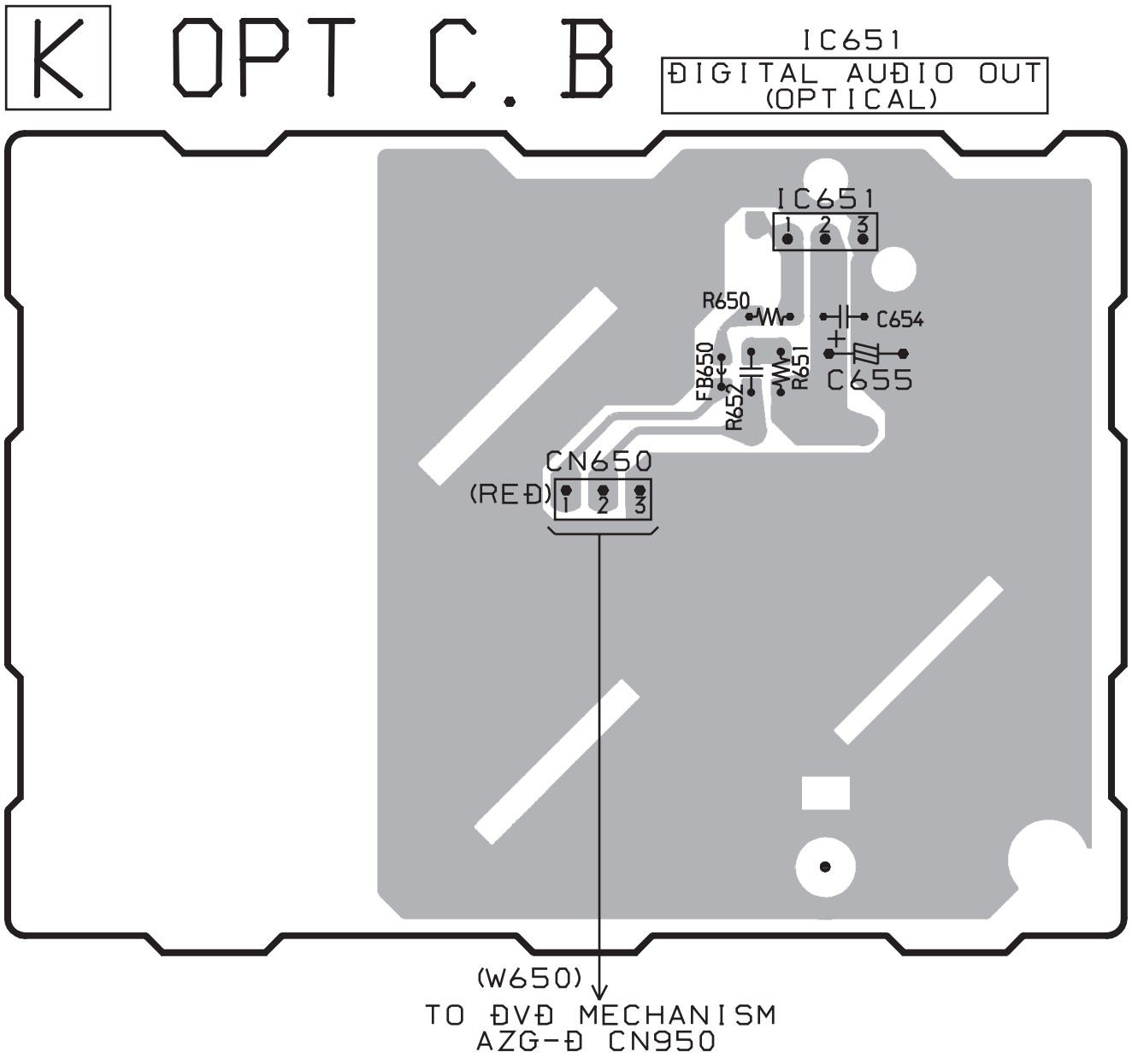
S806 ĐISC 3

S803 ĐISC CHANGE

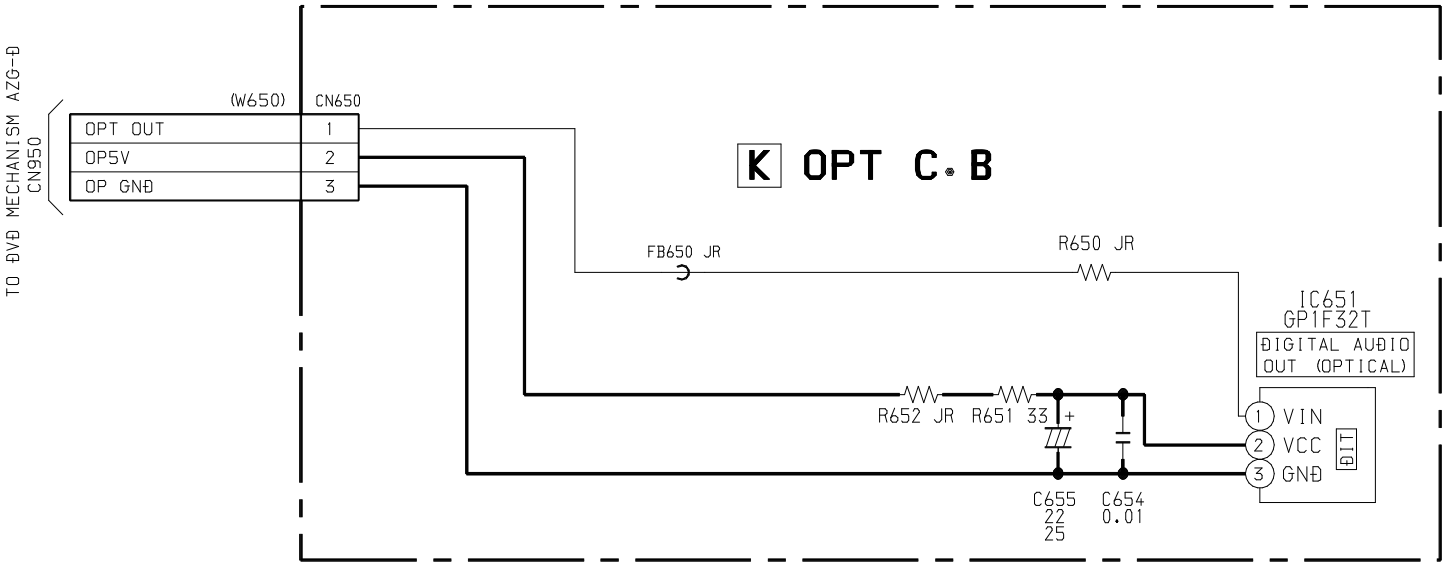
ĐISC ĐIRECT PLAY

SCHEMATIC DIAGRAM – 8 (FR-KEY)

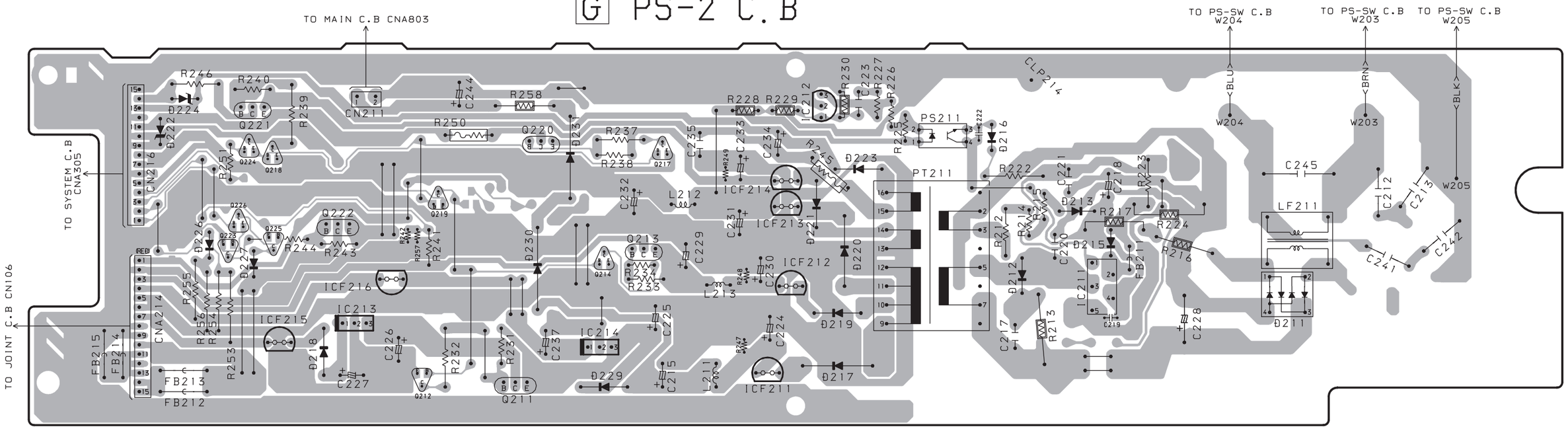



K OPT C.B
IC651
DIGITAL AUDIO OUT
(OPTICAL)
IC651
1 2 3
R650
C654
FB650
R652
R651
C655
CN650
(RED)
1 2 3
(W650)
TO DVD MECHANISM
AZG-D CN950

SCHEMATIC DIAGRAM – 9 (OPT)



G PS-2 C.B


TO MAIN C.B CNA803
TO SYSTEM C.B CNA305
TO JOINT C.B CN106
TO PS-SW C.B W204
TO PS-SW C.B W203
TO PS-SW C.B W205
W204
W203
W205
BLU
BRN
BLK
CN216
CN211
CNA214
RED
R246
R240
R239
R258
R250
R228
R229
R230
R227
R226
R225
R222
R223
R224
R216
R217
R214
R215
R212
R213
R251
R255
R256
R254
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R232
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R247
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R257
R235
R236
C244
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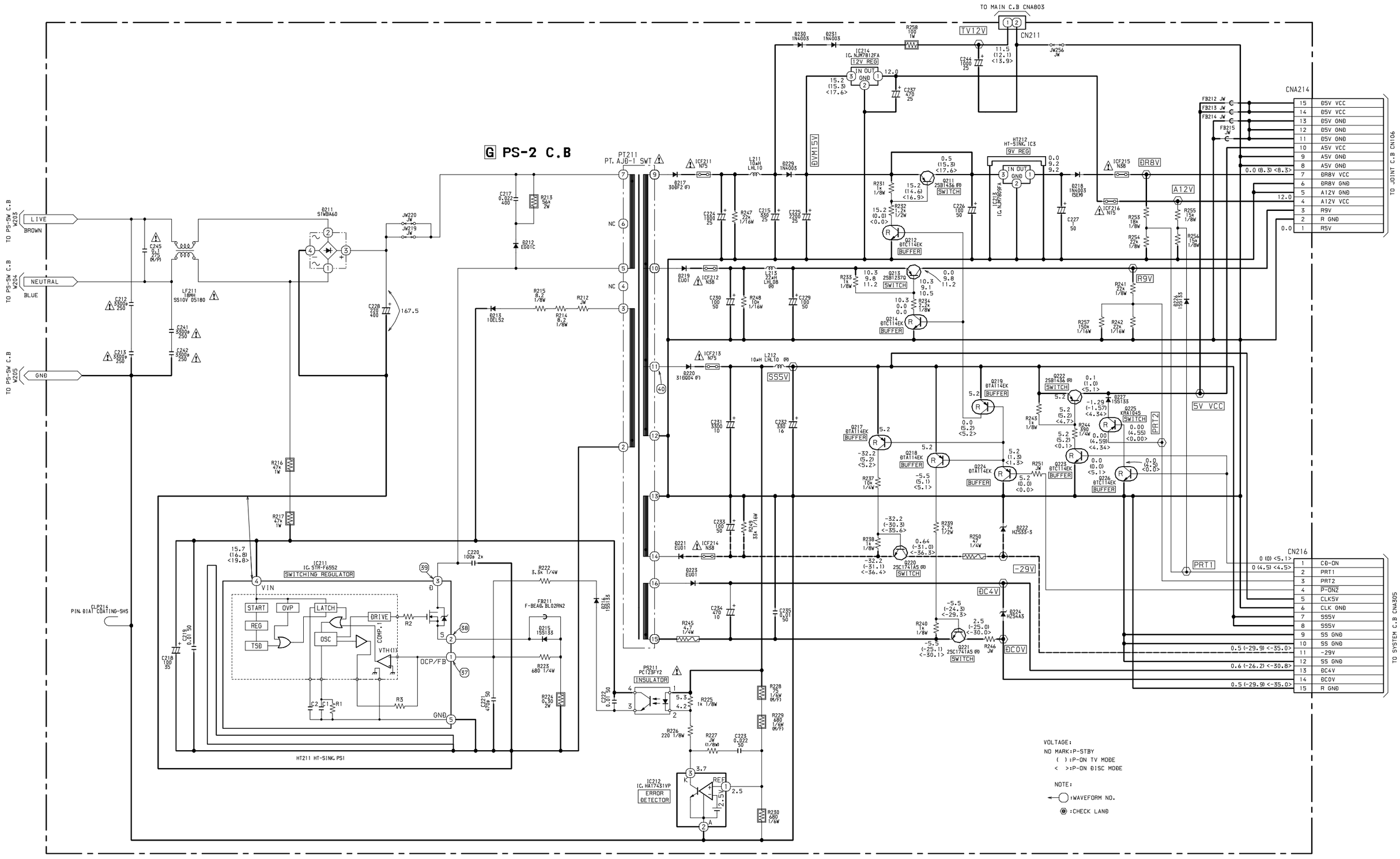
C280
C281
C282
C283


G PS-2 C.B
TO MAIN C.B CNA803
TV12V
CN211
JW256 JW
IC214 IC.NJM7812FA 12V REG
IN OUT GND
B230 1N4003
B231 1N4003
R258 100 1W
C244 1000 25
C257 470 25
8V/15V
HT212 HT-SINK.IC3 9V REG
IC213 IC.NJM7809FA
B218 1N4003 (SEMI)
ICF215 N58
ÐR8V
A12V
R253 18k 1/8W
R254 22k 1/8W
R255 15k 1/8W
R256 15k 1/8W
C227 50
ICF216 N15
R9V
R241 22k 1/8W
R242 22k 1/16W
R257 150k 1/16W
B226 1SS133
5V VCC
CNA214
FB212 JW
FB213 JW
FB214 JW
FB215 JW
ÐR8V VCC
ÐR8V GND
A12V GND
A12V VCC
R9V
R GND
Ð5V VCC
Ð5V VCC
Ð5V GND
Ð5V GND
Ð5V GND
A5V VCC
A5V GND
A5V GND
TO JOINT C.B CN106
TO PS-SW C.B W203 LIVE BROWN
TO PS-SW C.B W204 NEUTRAL BLUE
TO PS-SW C.B W205 GND
PT211 PT, AJD-1 SWT
ICF211 N75
L211 10uH LHL10
B229 1N4003
B217 30DF2 (F)
B212 EG01C
B211 S1WBA60
JW220 JW
JW219 JW
C228 220 400
167.5
C217 0.022 400
R213 56k 2W
C245 0.1 275 (M/P)
C212 3300p 250
C213 3300p 250
C241 3300p 250
C242 3300p 250
LF211 18mH SS10V 05180
R215 8.2 1/8W
R214 8.2 1/8W
R212 JW
B213 10EL52
R216 47k 1W
R217 47k 1W
CLP214 PIN BIAT COATING-SHS
IC211 IC.STR-F6552 SWITCHING REGULATOR
START
OVP
LATCH
REG
TSD
OSC
DRIVE
COMP.
VIN
VTH(1)
OCP/FB
GND
S
R2
R3
C1
C2
C218 100 35
C219 0.01 50
C220 1000p 2k
R222 3.5k 1/4W
FB211 F-BEAD, BL02RN2
B216 1SS133
B215 1SS133
R223 680 1/4W
R224 0.50 2W
C221 470p 50
HT211 HT-SINK.PSI
PS211 PC123FY2 INSULATOR
C222 0.01 50
R225 1k 1/8W
R226 220 1/8W
R227 JW (1/8W)
C223 0.022 50
R228 75 1/2W (M/F)
R229 680 1/4W (M/F)
R230 680 1/6W
IC212 IC.HA17431VP ERROR DETECTOR
REF
2.5
B219 EU01
ICF212 N58
L213 22uH LHL08 (B)
C230 100 50
R248 10k 1/16W
C229 100 50
R233 1k 1/8W
Q213 2SB1237Q SWITCH
R234 7.2k 1/8W
Q214 DTC114EK BUFFER
B220 31BQ04 (F)
ICF213 N75
L212 10uH LHL10 (B)
SS5V
C231 3300 10
C232 330 16
Q217 DTA114EK BUFFER
Q218 DTA114EK BUFFER
Q219 DTA114EK BUFFER
Q224 DTA114EK BUFFER
R237 10k 1/4W
R251 JW
Q222 2SB1456 (B) SWITCH
Q223 DTC114EK BUFFER
Q225 KRA104S SWITCH
Q226 DTC114EK BUFFER
B227 1SS133
R243 1k 1/8W
R244 390 1/4W
PRT2
PRT1
C233 100 50
R249 33k 1/16W
B221 EU01
ICF214 N58
B223 EU01
C234 470 10
C235 0.01 50
R245 4.7 1/4W
R238 1k 1/8W
Q220 2SC1741AS (R) SWITCH
R239 2.7k 1/2W
R250 47 1/4W
B222 HZS33-3
-29V
ÐC4V
ÐC0V
B224 HZS4A5
R240 1k 1/8W
Q221 2SC1741AS (R) SWITCH
R246 JW
CN216
CD-ON
PRT1
PRT2
P-ON2
CLK5V
CLK GND
SS5V
SS5V
SS GND
SS GND
-29V
ÐC4V
SS GND
ÐC0V
R GND
TO SYSTEM C.B CNA305
VOLTAGE:
NO MARK:P-STBY
( ):P-ON TV MODE
< >:P-ON DISC MODE
NOTE:
:WAVEFORM NO.
:CHECK LAND

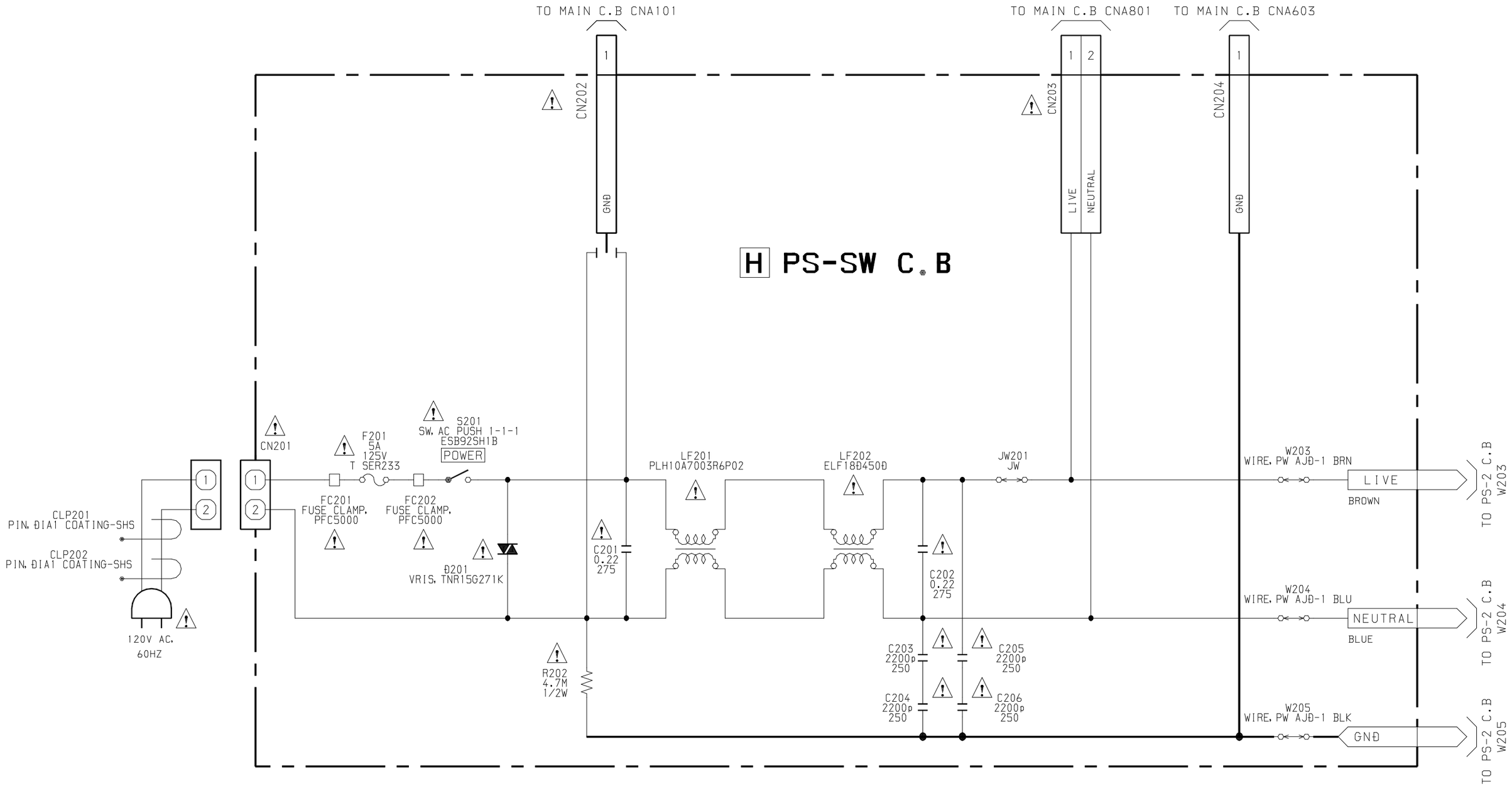
32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

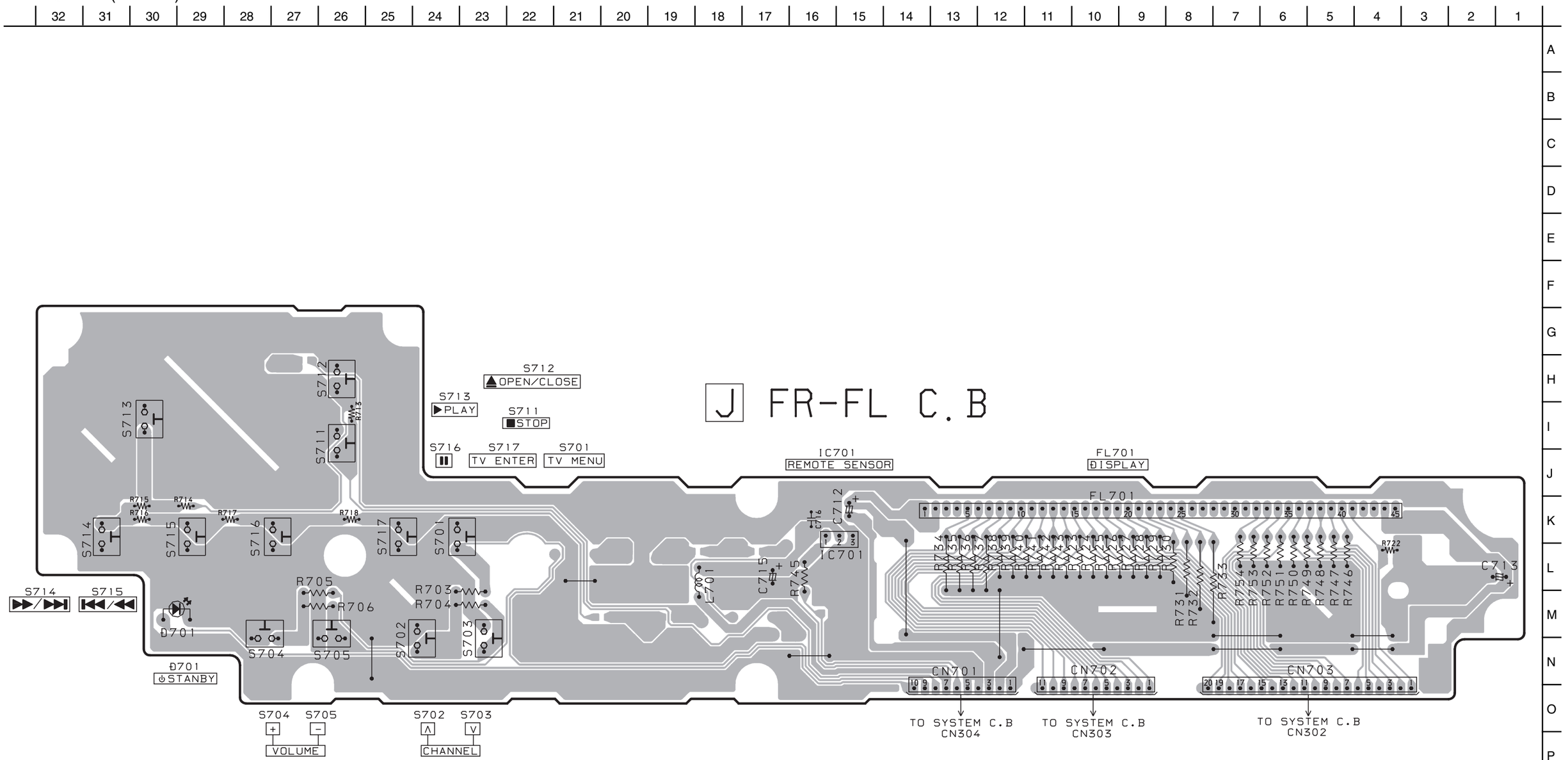
A B C D E F G H I J K L M N O P Q R S T U

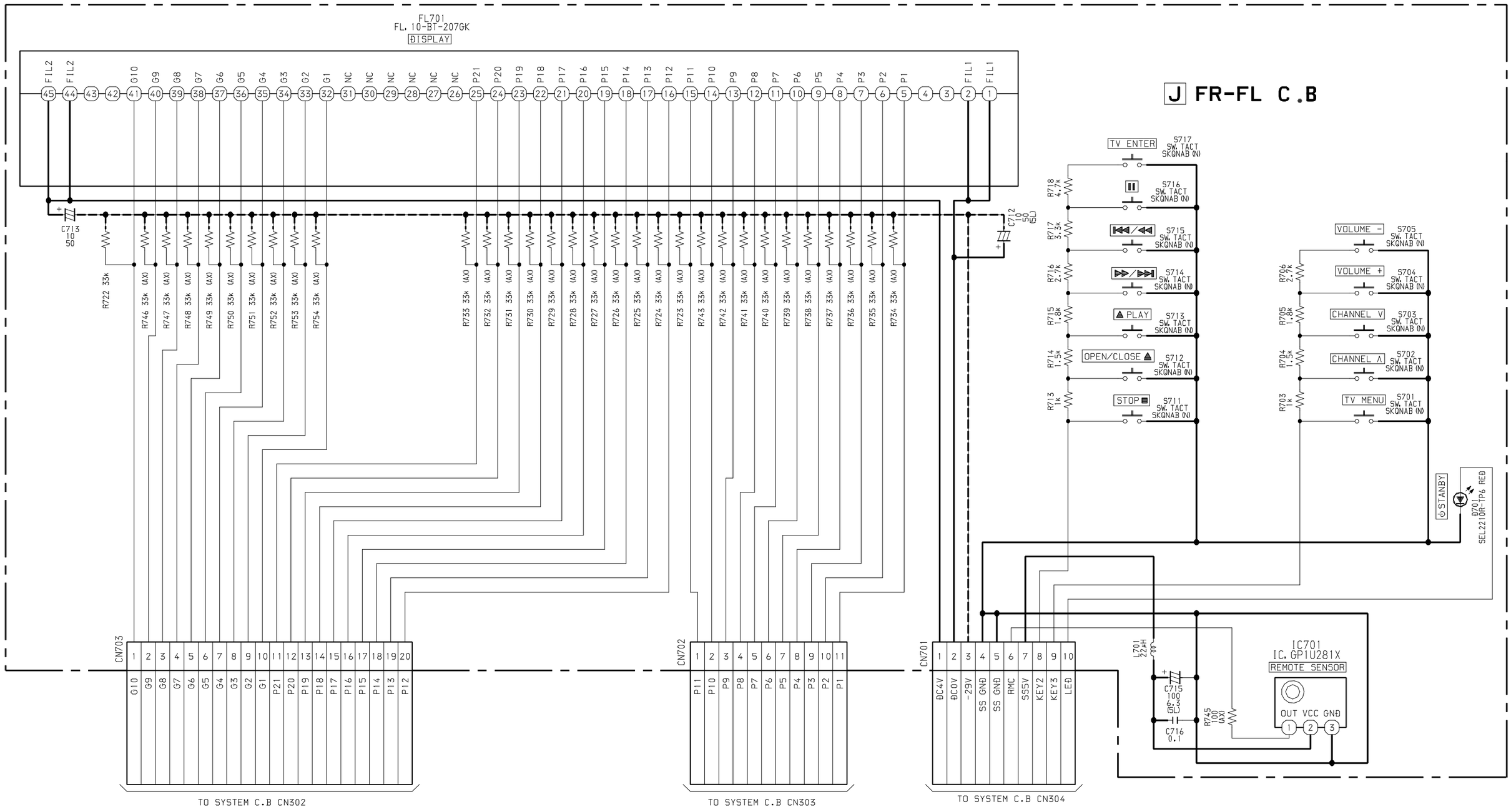
H PS-SW C.B

TO PS-2 C.B W203
TO MAIN C.B CNA801
TO MAIN C.B CNA603
TO PS-2 C.B W205
TO MAIN C.B CNA101
W203
W205
CN203
CN204
CN202
C205
C206
C204
R202
C203
S201
S201 POWER
FC201
FC202
F201
LF202
LF201
D201
W204
C202
C201
CLP202
CLP201
CN201
AC 120V, 60HZ
TO PS-2 C.B W204

SCHEMATIC DIAGRAM – 11 (PS-SW)

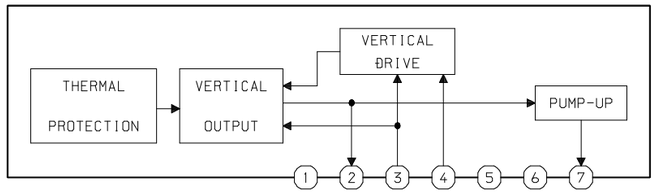



J FR-FL C.B
S712
OPEN/CLOSE
S713
PLAY
S711
STOP
S716
S717
TV ENTER
S701
TV MENU
IC701
REMOTE SENSOR
FL701
DISPLAY
S714
S715
S704
S705
VOLUME
S702
S703
CHANNEL
D701
STANBY
CN701
CN702
CN703
TO SYSTEM C.B
CN304
TO SYSTEM C.B
CN303
TO SYSTEM C.B
CN302

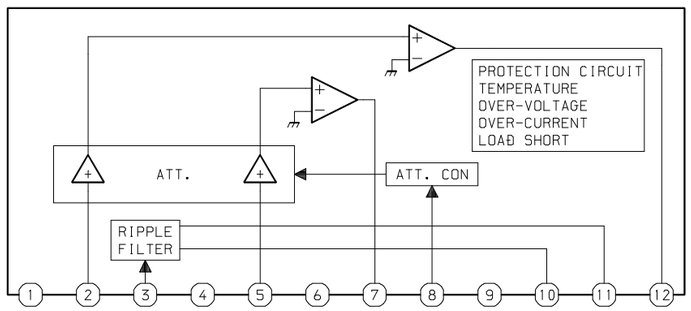

FL701
FL. 10-BT-207GK
DISPLAY
J FR-FL C.B
TV ENTER
S717
SW. TACT
SKQNAB (N)
S716
S715
S714
PLAY
S713
OPEN/CLOSE
S712
STOP
S711
VOLUME -
S705
VOLUME +
S704
CHANNEL V
S703
CHANNEL Λ
S702
TV MENU
S701
STANBY
D701
SEL2210R-TP6 RED
C712
50
(SL)
C713
10
50
IC701
IC. GP1U281X
REMOTE SENSOR
OUT VCC GND
L701
22μH
C715
10
C716
0.1
R745
100
(AX)
CN703
CN702
CN701
TO SYSTEM C.B CN302
TO SYSTEM C.B CN303
TO SYSTEM C.B CN304

IC BLOCK DIAGRAM

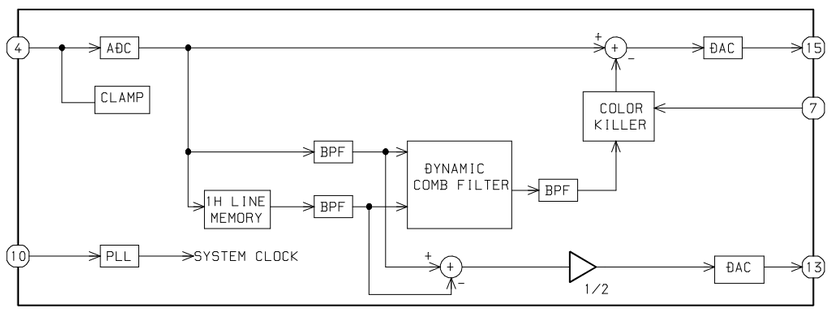
IC, LA7832



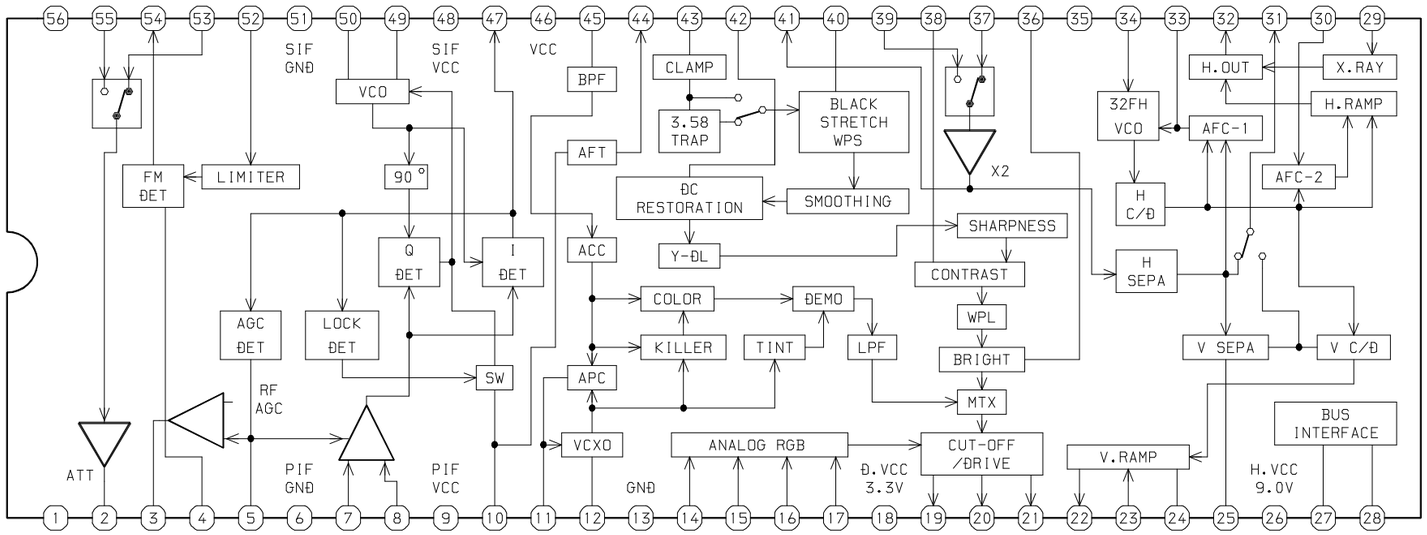
IC, AN5277



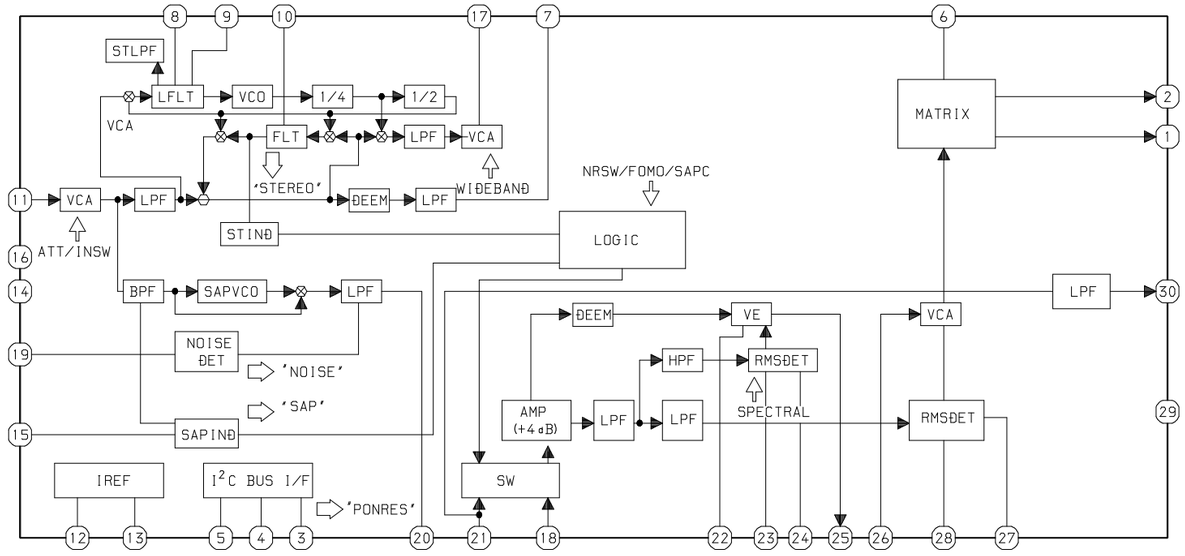
IC, TC90A45P



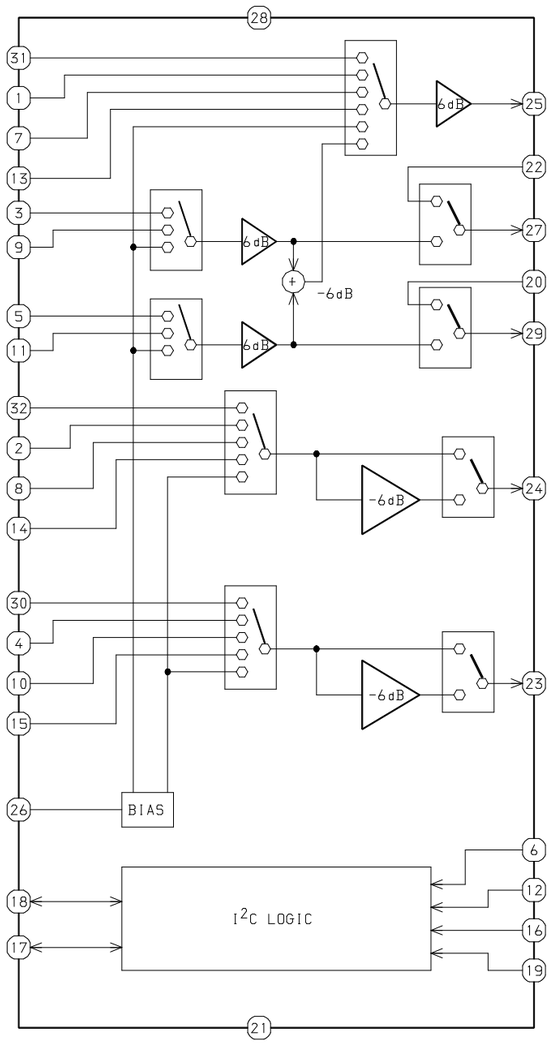
IC, TA1268N



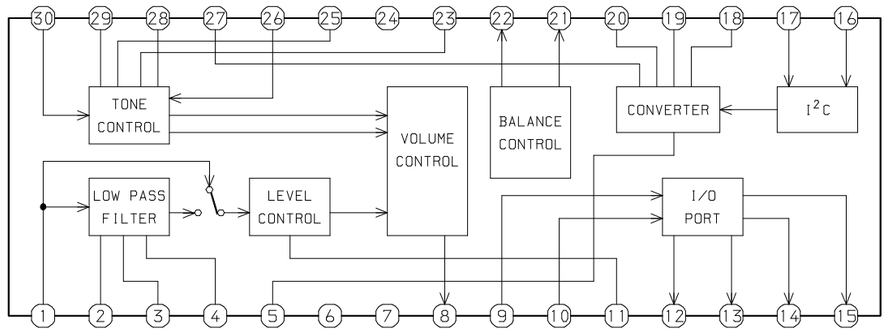
IC, CXA2104S



IC, MM1311AĐ

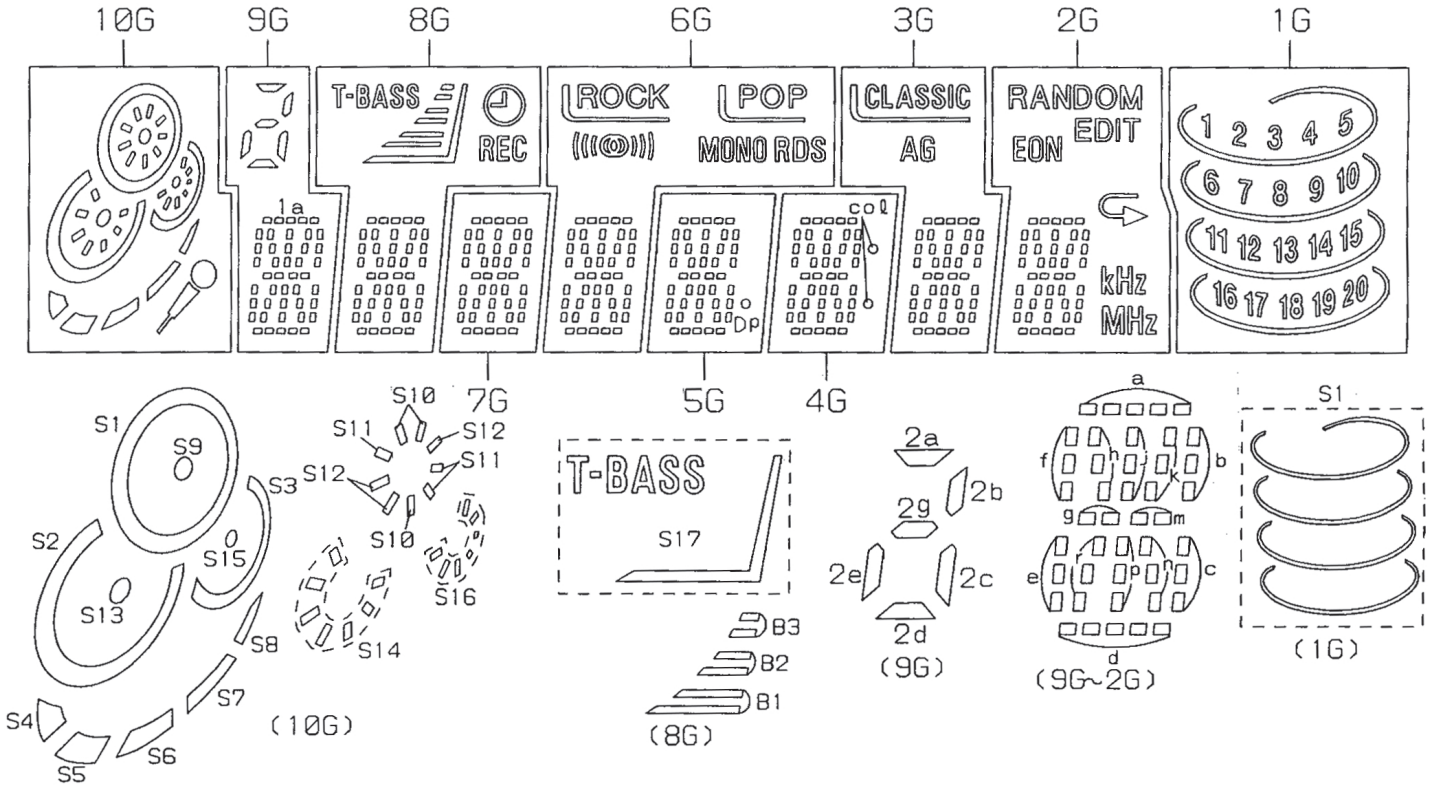


IC, TA1216AN



FL (10-BT-207GK) GRID ASSIGNMENT AND ANODE CONNECTION

GRID ASSIGNMENT



ANODE CONNECTION

	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
P1	S6	1d	d	d	d	d	d	d	d	20
P2	S7	1n	n	n	n	n	n	n	n	19
P3	S8	1p	p	p	p	p	p	p	p	18
P4	S14	1r	r	r	r	r	r	r	r	17
P5	S13	1e	e	e	e	e	e	e	e	16
P6	S2	1c	c	c	c	c	c	c	c	15
P7	S16	1g	g	g	g	g	g	g	g	14
P8	S15	1m	m	m	m	m	m	m	m	13
P9	S3	1f	f	f	f	f	f	f	f	12
P10	S12	1b	b	b	b	b	b	b	b	11
P11	S11	1k	k	k	k	k	k	k	k	10
P12	S10	1j	j	j	j	j	j	j	j	9
P13	S9	1h	h	h	h	h	h	h	h	8
P14	S1	1a	a	a	a	a	a	a	a	7
P15	S5	–	REC	–	((◎))	Dp	col (DOWN)	–	MHz	6
P16	S4	–	🕘	–	MONO	–	col (UP)	–	kHz	5
P17	🎤	2a,2g 2d	S17	–	RDS	–	–	AG	↪	4
P18	–	2e	B1	–	(ROCK)	–	–	(CLASSIC)	EON	3
P19	–	2c	B2	–	(POP)	–	–	–	EDIT	2
P20	–	2b	B3	–	ROCK POP	–	–	CLASSIC	RANDOM	1
P21	–	–	–	–	–	–	–	–	–	S1

IC DESCRIPTION

IC, M37272EFSP-AJD1UOTP

Pin No.	Pin Name	I/O	Description
1	$\overline{\text{BLK H}}$	I	Blanking H sync input.
2	$\overline{\text{BLK V}}$	I	Blanking V sync input.
3	A MUTE	O	Audio Amp mute.
4	L MUTE	O	Audio mute.
5	Q SUR	O	Q surround switch.
6	WP	O	EEPROM Write protect.
7	V MUTE	O	Video mute.
8	SEL	O	BPF switch.
9	$\overline{\text{MAIN SW}}$	–	Connected to GND throuhg a resistor.
10	$\overline{\text{REMOCON}}$	I	Remote control signal input.
11	$\overline{\text{SD}}$	I	Pluse check.
12	$\overline{\text{EXT}}$	I	I^2C switch.
13	PON	O	Power switch.
14	AVCC	–	VCC.
15	HLF	–	Filter connection terminal.
16	VHOLD	–	Condenser connection terminal.
17	CV IN	I	Complex video signal input
18	VSS	–	GND.
19	XIN	I	Main Clock (8 MHz).
20	XO	O	Main Clock (8 MHz).
21	VSS	–	GND.
22	VCC	–	VCC.
23	OSC2	–	Not used.
24	OSC1	–	Not used.
25	$\overline{\text{RST}}$	I	Reset input.
26	SDOUT	O	Not used.
27	FBT DET	O	FBT detection (over 2.5V).
28	REG DET	I	REG detection (over 2.5V).
29	AFTV	I	AFT voltage input.
30	KEY	I	Key input.
31	SDA2	I	I^2C bus CH2 data (Reg IC).
32	SDA1	I	I^2C bus CH1 data (EEPROM).
33	SCL2	I	I^2C bus CH2 data (Reg IC).
34	SCL1	I	I^2C bus CH1 data (EEPROM).
35	BBE	O	BBE switch.
36	VM MUTE	O	VM mute.
37	$\overline{\text{LED}}$	O	Power LED switch.
38	NC	–	Not connected.
39	FAST BLK	O	OSD Blanking.
40	B	O	OSD B output.
41	G	O	OSD G output.
42	R	O	OSD R output.

IC, M38B59EFFP-AJD1UOTP

Pin No.	Pin Name	I/O	Description
1	KEY3	I	Key input 3.
2	S–DET	I	S input monitor. (“L”=DETECTION)
3	SW–CD	I	Pick up/down and tray open/close detection signal input.
4	DISH–SENS	I	Turntable position detection signal input.
5	KEY1	I	Key input 1.
6	KEY2	I	Key input 2.
7	FR–$\overline{\text{DISC}}$	O	Front input/DVD input switching signal. (“H”=FRONT, "L"=DVD)
8	SETSEL	I	Destination switching input. (Connected to GND through a resistor)
9	RMC	I	Remote control signal input.
10	$\overline{\text{RESET}}$	I	Reset input.
11	$\overline{\text{MIC–DET}}$	I	Not used. (Connected to GND through a resistor)
12	POWER–IN	I	TV power on/off detection input.
13	VSS	–	GND.
14	XIN	–	4.19 MHz ceramic oscillator connection.
15	XOUT	–	4.19 MHz ceramic oscillator connection.
16	VCC	–	Power supply (5V).
17	SW2	O	“L” when S is detected. However, this is always “L” when DVD is selected.
18	$\overline{\text{P–ON2}}$	O	FL power supply on/off signal. (“L”=ON)
19	NC	–	Not used. (Connected to GND through a resistor)
20	PRT1	I	FL power supply monitor input.
21	PRT2	I	VM power supply monitor input.
22	12C–CE	I	CE : 12C-SYS.
23	SCRN–OFF	O	Screen off display. LED on signal. (“H”=ON)
24	DISH–F	O	CD tray rotation control signal.
25	DISH–R	O	CD tray rotation control signal.
26	CLOSE	O	CD tray rotation control signal.
27	OPEN	O	CD tray rotation control signal.
28	VEE	–	(-) power supply for FL display.
29~31	NC	–	Not used. (Connected to GND through a resistor)
32~52	P1~P21	O	FL display tube drive signal.
53	NC	–	Not connected.
54	MIC–MUTE	–	Not used.
55~64	G1~G10	O	FL display tube drive signal.
65	C–CLK	O	CLK : HOST–CD.
66	S–CLK1	O	CLK : SYS–12C.
67	S–SDO	O	DATA : SYS–12C.
68	C–SDO	O	DATA : HOST–CD.
69	SS–CE	O	CE : SYS–12C.
70	S–CLK2	O	CLK : 12C–SYS.
71	NC	–	Not used. (Connected to GND through a resistor)
72	S–RD1	I	DATA : 12C–SYS.

Pin No.	Pin Name	I/O	Description
73	AVSS	–	GND.
74	VREF	–	A/D reference power supply.
75	C–RD1	I	DATA : CD–HOST.
76	STB	–	Not used. (Connected to GND through a resistor)
77	CLK	–	Not used. (Connected to GND through a resistor)
78	CD–CE	O	BUSY : HOST–CD.
79	DATA	–	Not used. (Connected to GND through a resistor)
80	CD–ON	O	CD block power supply on/off signal.

IC, UPD78F0034AYGC-AJD1UFLASH

Pin No.	Pin Name	I/O	Description
1~8	NC	–	Not used. (Connected to GND through a resistor)
9	VSS	–	GND.
10	VDD	–	Power supply.
11~12	NC	–	Not used. (Connected to GND through a resistor)
13	SDA	I	Connect to the TV microprocessor's 12C bus line.
14	SCL	I	Connect to the TV microprocessor's 12C bus line.
15	12C–CE	O	CE : 12C–SYS.
16	S–RD1	O	DATA : 12C–SYS.
17	S–CLK2	O	CLK : 12C–SYS.
18	S–SDO	I	DATA : SYS–12C.
19	NC	–	Not used. (Connected to GND through a resistor)
20	S–CLK1	I	CLK : SYS–12C.
21~23	NC	–	Not used. (Connected to GND through a resistor)
24	VDD	–	Supply.
25	AVSS	–	GND.
26~33	NC	–	Not used. (Connected to GND through a resistor)
34	AVREF	–	GND.
35	AVDD	–	Supply.
36	$\overline{\text{RESET}}$	I	Rest input.
37	NC	–	Not connected.
38	NC	–	Not used. (Connected to VDD)
39	NC	–	Not used. (Connected to GND)
40	X2	–	4.19MHz ceramic oscillator.
41	X1	–	4.19MHz ceramic oscillator.
42	VSS	–	GND.
43	POWER–IN	I	Enter low power consumption mode (HALT) when both TV and SYS are "P-OFF." Cancel when either one is turned "ON".
44	$\overline{\text{P–ON2–IN}}$	I	Enter low power consumption mode (HALT) when both TV and SYS are "P-OFF." Cancel when either one is turned "ON".
45	$\overline{\text{MAIN–SW}}$	I	"H" for low power consumption mode (STOP). "L" for cancel. *L fixed.
46	SS–CE	I	CE : SYS–12C.
47	TV–RMC	O	Control signal to TV microprocessor.
48~64	NC	–	Not used. (Connected to GND through a resistor)

VOLTAGE CHART

Test condition for TV mode : COLOR BAR, VOLUME 10

MAIN C.B

PIN NO.	MODE		
	DVD	TV	STANDBY
IC1			
1	4.29	4.28	5.11
2	4.91	4.91	5.11
3	0.01	0.01	3.52
4	0.01	0.01	1.20
5	0.02	0.02	0.02
6	5.10	5.10	5.10
7	0	0	0
8	0	2.99	3.04
9	5.08	5.08	5.04
10	5.21	5.24	0.47
11	4.62	4.62	5.11
12	5.08	5.08	5.08
13	5.00	5.00	0
14	5.05	5.05	5.08
15	2.20	2.18	0.75
16	0.18	0.20	0
17	2.33	2.24	0
18	0	0	0
19	2.26	2.25	2.33
20	2.29	2.29	2.31
21	0	0	0
22	5.05	5.05	5.08
23	5.03	5.03	5.06
24	5.04	5.05	5.08
25	5.02	5.03	5.06
26	5.04	5.05	0
27	0	0	5.10
28	0	0	5.06
29	2.42	1.89	0.12
30	5.09	5.10	5.10
31	3.68	3.69	5.08
32	5.04	5.05	5.10
33	3.85	3.85	5.08
34	5.05	5.05	5.10
35	0	0	0
36	0	0	0
37	5.04	5.05	0.03
38	5.04	5.05	5.08
39	0	0	0
40	0	0	0
41	0	0	0
42	0	0	0
IC3			
1	0	0	0
2	0	0	0
3	0	0	0
4	0	0	0
5	5.04	5.05	5.10
6	5.04	5.05	5.10
7	5.09	5.10	5.10
8	5.04	5.05	5.08
IC4			
1	5.04	5.05	5.08
2	0	0	0
3	5.02	5.03	5.06
IC102			
1	5.08	5.06	0
2	0	0	0
3	8.88	8.90	0.43

PIN NO.	MODE		
	DVD	TV	STANDBY
IC301			
1	0	0	0
2	3.87	3.85	0.21
3	0	3.71	0
4	3.25	3.25	0
5	0.69	4.43	0.22
6	0	0	0
7	1.98	1.96	0
8	1.98	1.97	0
9	8.83	8.82	0.44
10	4.39	4.38	0.34
11	6.25	6.25	0
12	4.77	4.77	0
13	0	0	0
14	0	0	0
15	4.80	4.79	0.13
16	4.77	4.76	0.20
17	4.71	4.70	0.18
18	3.18	3.17	0.44
19	2.85	2.75	0
20	2.71	2.67	0
21	2.73	2.75	0
22	0.77	0.77	0
23	5.05	5.05	0.26
24	5.13	5.13	0
25	6.43	6.52	0.24
26	8.95	8.96	0.46
27	3.85	3.85	5.09
28	3.70	3.70	5.09
29	2.33	2.40	0
30	1.27	1.27	0
31	1.12	1.13	0.24
32	1.25	1.25	0
33	7.50	7.47	0
34	6.01	6.04	0.32
35	0	0	0
36	3.17	3.16	0.20
37	3.28	3.24	0
38	2.98	2.93	0.20
39	1.86	1.84	0.27
40	5.18	5.18	0.44
41	3.88	3.90	0.17
42	4.71	4.69	0.50
43	4.65	4.64	0.37
44	2.43	1.88	0.12
45	3.92	3.91	0.43
46	8.96	8.93	0.44
47	5.02	3.70	0
48	8.79	8.78	0.44
49	7.79	7.77	0.44
50	7.79	7.77	0.44
51	0	0	0
52	0	0	0
53	2.78	2.77	0.20
54	3.52	4.50	0
55	2.77	2.75	0.30
56	0	0	0

PIN NO.	MODE		
	DVD	TV	STANDBY
IC501			
1	0	0	0
2	13.8	13.8	0.92
3	26.0	26.0	1.34
4	0.81	0.77	0
5	0.75	0.77	0
6	25.9	25.8	0.73
7	1.60	1.65	0
IC601			
1	25.9	25.3	0.60
2	0	0	0
3	0	0	0
4	0	0	0
5	6.44	6.42	0
6	6.44	6.42	0.18
7	2.66	2.70	0.14
8	25.9	25.8	0.73
IC701			
1	4.06	4.06	0.27
2	4.06	4.05	0.25
3	3.73	3.70	5.09
4	3.88	3.88	5.10
5	0	0	0
6	4.04	4.03	0.23
7	3.96	3.95	0.18
8	4.06	4.05	0.10
9	3.93	3.91	0.05
10	5.22	5.20	0.12
11	4.04	4.03	0.15
12	1.25	1.24	0.35
13	1.28	1.24	0
14	0	0	0
15	3.97	4.56	0
16	8.83	8.82	0.46
17	4.04	4.03	0
18	4.05	4.05	0
19	3.95	3.12	0
20	3.87	4.00	0
21	4.05	4.05	0
22	3.99	3.97	0
23	4.04	4.03	0
24	1.76	1.73	0.55
25	4.04	4.03	0
26	4.05	4.04	0
27	1.71	1.69	0.68
28	3.92	3.92	0.30
29	0	0	0
30	4.02	4.01	0
IC802			
1	120	120	0.41
2	86.3	88.0	0.92
3	0	0	0
IC803			
1	5.10	5.10	5.11
2	0	0	0
3	14.0	12.0	11.5
IC804			
1	8.93	8.92	0.46
2	0	0	0
3	12.7	12.8	0.46
IC805			
1	9.10	9.09	0.44
2	0	0	0
3	12.7	12.8	0.46

PIN NAME	MODE		
	DVD	TV	STANDBY
Q1			
E	0	0	0
C	4.62	4.62	5.10
B	0.30	0.30	0.07
Q2			
E	5.10	5.10	5.10
C	0	0	5.00
B	5.04	5.04	0.02
Q3			
E	0	0	0
C	4.27	4.26	5.10
B	0.02	0.02	0
Q4			
E	0	0	0
C	4.90	4.90	5.10
B	0.08	0.08	0
Q5			
E	5.04	5.05	5.08
C	0	0	5.06
B	5.04	5.03	4.42
Q201			
E	4.38	3.06	0
C	8.82	8.80	0.44
B	5.04	3.71	0
Q202			
E	3.10	3.72	0
C	8.83	8.81	0.44
B	3.69	4.36	0
Q301			
E	0.25	-0.32	-0.08
C	3.03	2.89	0.31
B	0	0	0
Q303			
E	2.65	2.65	0
C	4.89	4.88	0.44
B	3.28	3.28	0.16
Q304			
E	1.80	1.79	0
C	6.66	6.66	0.44
B	2.41	2.40	0.12
Q305			
E	6.05	6.03	0
C	8.89	8.87	0.44
B	6.66	6.65	0.44
Q306			
E	8.89	8.89	0.44
C	0.96	0.95	0
B	8.81	8.81	0.43
Q307			
E	0	0	0
C	8.83	8.81	0.43
B	0	0	0
Q309			
E	3.63	2.74	0.43
C	0	0	0
B	2.97	2.08	0
Q310			
E	0	0	0
C	0.95	0	0.22
B	0	2.55	0
Q311			
E	3.93	3.93	0.47
C	0	0	0
B	3.30	3.30	0.16

PIN NAME	MODE		
	DVD	TV	STANDBY
Q601			
E	0	0	0
C	96.4	96.0	0.02
B	0.33	0.33	0
Q602			
E	0	0	0
C	132	131	0.06
B	-0.06	-0.06	0
Q603			
E	0	0	0
C	20.6	21.6	0
B	0.56	0.57	0.05
Q604			
E	0	0	0
C	5.10	5.10	5.10
B	0	0	0
Q605			
E	5.10	5.10	5.10
C	0	0	5.10
B	5.10	5.10	4.39
Q706			
E	3.80	3.70	0
C	8.93	8.94	0.46
B	4.47	4.37	0
Q801			
E	0	0	0
C	0.06	0.05	11.2
B	0.73	0.73	0
Q806			
E	5.08	5.08	5.11
C	-0.72	-0.88	5.10
B	5.05	5.05	4.38
Q811			
E	119	119	0.40
C	0	0	0
B	119	119	0.29

AUDIO C.B

PIN NO.	MODE		
	DVD	TV	STANDBY
IC401			
1	4.00	4.00	0.57
2	4.00	4.00	0.57
3	0.02	0.02	0
4	0	0	0.34
5	4.01	4.01	0.55
6	4.01	4.01	0.55
7	4.01	4.01	0.55
8	0	0	0
9	4.01	4.01	0.54
10	4.00	4.01	0.54
11	4.01	4.01	0.53
12	4.01	4.01	0.52
13	4.01	4.01	0.52
14	4.65	4.65	0.75
15	4.00	4.00	0.54
16	8.68	8.67	0.46

PIN NO.	MODE		
	DVD	TV	STANDBY
IC402			
1	0	0	0
2	4.31	0.05	0.80
3	6.27	6.28	0.79
4	8.67	8.69	0.46
5	4.45	4.45	0
6	4.45	4.45	0.57
7	4.45	4.45	0.53
8	4.45	4.45	0.53
9	4.44	4.42	0.51
10	4.44	4.45	0.50
11	4.44	4.44	0.46
12	4.44	4.44	0.23
13	4.44	4.44	0.55
14	4.43	4.41	0.54
15	4.43	4.44	0.52
16	0	0	0
17	4.44	4.44	0.50
18	4.46	4.45	0.49
19	4.45	4.45	0.46
20	4.45	4.45	0
21	8.70	8.68	0.46
22	6.26	6.25	0.76
23	0	0	0
24	4.32	0.05	0.75
IC403			
1	4.86	4.83	0.87
2	5.43	5.87	0.40
3	5.45	5.72	0.22
4	5.38	5.82	0.30
5	0.13	0.24	0.36
6	5.60	5.60	0.45
7	0	0	0
8	3.95	3.95	0
9	0	0	0
10	0	0	0
11	4.70	5.11	0.50
12	0.07	0.06	0.45
13	0.27	0.25	0.21
14	0.25	0.25	0.21
15	5.10	5.10	0.11
16	3.73	3.72	5.08
17	3.88	3.88	5.08
18	4.77	4.77	0.33
19	1.80	1.81	0.70
20	5.64	5.63	0
21	4.22	4.21	0
22	4.22	4.22	0
23	4.89	4.89	0
24	8.69	8.69	0.46
25	4.88	4.88	0
26	4.88	4.88	0
27	4.82	4.82	0
28	4.88	4.88	0
29	4.88	4.88	0
30	4.88	4.88	0

PIN NO.	MODE		
	DVD	TV	STANDBY
IC404			
1	0	0	0
2	0	0	0
3	30.1	30.1	0.53
4	0	0	0
5	0	0	0
6	0	0	0
7	15.1	15.1	0.21
8	0.66	0.66	2.91
9	0	0	0
10	31.4	31.5	3.39
11	19.9	19.9	3.34
12	15.1	15.1	0.18
IC405			
1	5.12	5.12	0
2	0	0	0
3	8.94	8.94	0.46
IC406			
1	4.25	4.25	0
2	4.89	4.90	0
3	4.24	4.24	0
4	4.89	4.90	0
5	4.22	4.23	0
6	8.12	8.11	0.41
7	4.66	4.24	0.18
8	4.89	4.90	0
9	4.65	4.25	0.17
10	4.89	4.90	0
11	4.22	4.22	0
12	0.84	8.12	0.04
13	4.32	4.32	0.22
14	4.89	4.90	0
15	4.89	4.90	0
16	0	0	0
17	3.72	3.71	5.08
18	3.88	3.88	5.08
19	0	0	1.16
20	4.22	4.22	0
21	0	0	0
22	5.19	5.08	0.74
23	4.11	4.10	0
24	4.11	4.10	0
25	5.15	5.05	0
26	4.26	4.25	0.21
27	4.19	4.15	0
28	8.92	8.92	0.46
29	3.47	3.47	0.22
30	4.89	4.89	0
31	4.25	4.60	0.69
32	4.89	4.88	0

PIN NO.	MODE		
	DVD	TV	STANDBY
IC407			
1	0	0	0
2	2.25	2.25	0
3	2.81	2.81	0
4	2.44	2.40	0
5	1.31	1.32	0
6	0	0	0
7	0	0	0
8	5.08	5.08	0
9	0	0	0
10	2.24	2.24	0
11	2.07	2.05	0
12	3.43	3.43	0
13	3.12	3.13	0
14	1.75	1.75	0
15	2.97	2.90	0
16	5.00	5.00	0

PIN NAME	MODE		
	DVD	TV	STANDBY
Q402			
E	0	0	0
C	5.03	5.04	4.42
B	0	0	0
Q403			
E	31.5	31.6	2.95
C	0	0	0
B	31.5	31.6	2.95
Q404			
E	26.0	25.8	1.12
C	0.05	0.05	0.14
B	25.9	25.8	0.72
Q405			
E	0	0	0
C	3.98	4.07	-0.12
B	0	0	0
Q406			
E	0	0	0
C	0	0	0
B	0	0	0
Q407			
E	0	0	0
C	0	0	0
B	0	0	0
Q408			
E	0	0	0
C	8.67	8.68	0.46
B	0	0	0
Q409			
E	1.44	1.44	0
C	8.29	8.28	0.46
B	2.00	2.00	0
Q410			
E	1.69	1.67	0
C	8.92	8.92	0.46
B	2.31	2.29	0
Q411			
E	4.50	4.40	0
C	8.92	8.92	0.46
B	5.15	5.05	0
Q412			
E	2.47	2.42	0.45
C	0	0	0
B	1.86	1.81	0

PIN NAME	MODE		
	DVD	TV	STANDBY
Q413			
E	4.49	4.39	0
C	8.92	8.94	0.46
B	5.15	5.05	0
Q414			
E	8.93	8.93	0.46
C	2.94	2.83	0
B	8.29	8.29	0.46
Q415			
E	1.35	1.30	0
C	8.29	8.29	0.46
B	1.91	1.87	0
Q416			
E	8.92	8.93	0.46
C	3.15	3.14	0
B	8.29	8.29	0.46
Q417			
E	2.22	2.23	0.46
C	0	0	0
B	1.58	1.58	0.08
Q418			
E	3.55	3.52	0
C	8.92	8.93	0.46
B	4.19	4.16	0
Q751			
E	3.46	3.46	0
C	8.69	8.70	0.46
B	4.10	4.11	0
Q752			
E	3.46	3.46	0
C	8.69	8.69	0.46
B	4.10	4.10	0
Q756			
E	3.23	3.23	0
C	8.69	8.69	0.46
B	3.88	3.87	0.21

NK C.B

PIN NAME	MODE		
	DVD	TV	STANDBY
Q901			
E	8.40	8.42	0.43
C	136	143	1.39
B	8.88	8.88	0.43
Q902			
E	8.42	8.41	0.43
C	143	146	1.39
B	8.88	8.88	0.43
Q903			
E	8.42	8.41	0.44
C	141	142	1.39
B	8.88	8.88	0.44
Q904			
E	2.55	2.47	0.15
C	8.42	8.42	0.44
B	2.93	2.85	0
Q905			
E	2.42	2.40	0.15
C	8.42	8.41	0.44
B	2.80	2.77	0
Q906			
E	2.44	2.47	0.15
C	8.42	8.40	0.44
B	2.82	2.85	0

PIN NAME	MODE		
	DVD	TV	STANDBY
Q907			
E	0.18	0.20	0
C	8.44	8.45	1.21
B	0	0	0
Q908			
E	1.66	1.66	0.17
C	0	0	0
B	0.97	0.96	0
Q951			
E	1.58	1.58	0
C	8.87	8.86	0.44
B	2.22	2.22	0
Q952			
E	8.19	8.18	0.44
C	3.20	3.20	0
B	7.55	7.55	0
Q953			
E	0.60	0.60	0
C	5.59	5.59	0.44
B	1.25	1.24	0.06
Q954			
E	2.00	2.00	0
C	5.89	5.89	0.44
B	2.65	2.66	0.13
Q955			
E	5.28	5.27	0
C	8.88	8.87	0.44
B	5.88	5.88	0.44
Q956			
E	119	118	0
C	59.0	59.2	0.19
B	118	118	0
Q957			
E	0.23	0.13	0
C	59.0	59.2	0.13
B	0.66	0.68	0

OPT C.B

PIN NO.	MODE		
	DVD	TV	STANDBY
IC651			
1	1.60	0.33	0
2	4.93	0.98	0
3	0	0	0

JOINT C.B

PIN NO.	MODE		
	DVD	TV	STANDBY
IC101			
1	6.19	5.40	0.37
2	0	3.83	0
3	5.45	4.67	0.55
4	0	0	0
5	5.46	4.67	0.38
6	2.68	1.88	0.23
7	0	3.83	0
8	3.40	2.62	0
9	2.98	2.61	0
10	0	0	0
11	6.18	5.41	-0.06
12	0	3.83	0
13	11.1	9.66	0
14	6.19	5.39	0.32
15	0	0	0
16	6.17	5.40	-0.08
IC102			
1	6.17	5.37	0
2	0	3.83	0
3	5.43	4.64	0.63
4	0	0	0
5	5.43	4.65	0
6	2.68	1.83	0.52
7	0	3.83	0
8	3.40	2.62	0
9	2.99	2.61	0
10	0	0	0
11	6.15	5.40	0
12	0	3.83	0
13	11.1	9.66	0
14	6.16	5.38	0
15	0	0	0
16	6.15	5.38	0
IC103			
1	5.53	4.83	0.25
2	5.53	4.83	0.20
3	5.53	4.83	0
4	0	0	0
5	5.53	4.83	0
6	5.53	4.83	0.24
7	5.53	4.83	0.20
8	11.1	9.69	0

FR-FL C.B

PIN NO.	MODE		
	DVD	TV	STANDBY
IC701			
1	5.19	5.22	5.22
2	5.21	5.24	5.24
3	0	0	0

SYSTEM C.B

PIN NO.	MODE		
	DVD	TV	STANDBY
IC301			
1	5.21	5.24	5.24
2	5.19	5.20	5.23
3	4.87	4.88	4.88
4	5.73	5.75	5.79
5	5.21	5.24	5.24
6	5.21	5.24	5.24
7	0	5.09	0
8	0	0	0
9	5.16	5.22	5.22
10	5.14	5.16	5.19
11	0	0	0
12	5.00	5.00	0
13	0	0	0
14	2.24	2.25	2.27
15	2.52	2.53	2.54
16	5.19	5.21	5.24
17	0.03	8.11	0
18	0	0	5.23
19	0	0	0
20	4.66	4.66	0
21	4.35	4.59	0
22	1.64	1.65	5.24
23	3.75	3.78	3.76
24	0	0	0
25	0	0	0
26	0	0	0
27	0	0	0
28	-35.0	-30.2	0.58
29	0	0	0
30	0	0	0
31	0	0	0
32	-27.5	-27.2	0.58
33	-32.5	-27.2	0.58
34	-27.5	-24.3	0.58
35	-32.5	-24.3	0.58
36	-32.5	-24.3	0.58
37	-27.5	-21.3	0.58
38	-34.9	-27.2	0.58
39	-34.9	-27.2	0.58
40	-30.0	-24.3	0.58
41	-30.0	-21.3	0.58
42	-32.4	-24.3	0.58
43	-30.0	-24.3	0.58
44	-34.9	-27.2	0.58
45	-27.5	-24.3	0.58
46	-32.4	-27.2	0.58
47	-32.4	-27.2	0.58
48	-34.9	-30.1	0.58
49	-34.9	-30.1	0.58
50	-34.9	-27.2	0.58
51	-34.9	-27.2	0.58
52	-34.9	-30.1	0.58
53	-34.7	-29.9	0.57
54	-34.7	-29.9	0.57
55	-32.5	-27.2	0.63
56	-32.5	-27.2	0.63
57	-32.4	-27.2	0.63
58	-32.4	-27.2	0.63
59	-32.4	-27.2	0.63
60	-32.4	-27.2	0.63
61	-32.4	-27.2	0.63
62	-32.4	-27.2	0.63

PIN NO.	MODE		
	DVD	TV	STANDBY
IC301			
63	-32.4	-27.2	0.63
64	-32.4	-27.2	0.63
65	5.03	4.59	0
66	5.18	5.16	5.23
67	0.02	0.02	0.02
68	5.12	4.91	0
69	5.18	5.16	5.23
70	5.20	5.22	5.24
71	0.43	0.42	0
72	5.09	5.12	5.24
73	0	0	0
74	5.19	5.21	5.23
75	4.98	0.99	0
76	0	0	0
77	0	0	0
78	1.66	0.99	0
79	0	0	0
80	5.11	0	0

PIN NO.	MODE		
	DVD	TV	STANDBY
IC302			
1	0	0	0
2	0	0	0
3	0	0	0
4	0	0	0
5	0	0	0
6	0	0	0
7	0	0	0
8	0	0	0
9	0	0	0
10	5.22	5.24	5.25
11	0	0	5.19
12	0	0	5.19
13	3.72	3.72	5.08
14	3.87	3.88	5.08
15	1.65	1.67	5.24
16	5.10	5.12	5.24
17	5.20	5.22	5.24
18	0.02	0.02	0.02
19	0	0	0
20	5.18	5.22	5.23
21	0	0	0
22	0	0	0
23	0	0	0
24	5.21	5.24	5.25
25	0	0	0
26	0	0	0
27	0	0	0
28	0	0	0
29	0	0	0
30	0	0	0
31	0	0	0
32	0	0	0
33	0	0	0
34	0	0	0
35	5.22	5.24	5.25
36	5.14	5.17	5.19
37	0.03	0.03	0.03
38	5.22	5.24	5.25
39	0	0	0
40	3.08	3.11	3.11
41	2.85	2.78	2.83

PIN NO.	MODE		
	DVD	TV	STANDBY
IC302			
42	0	0	0
43	5.00	5.00	0
44	0	0	5.24
45	0	0	0
46	5.18	5.22	5.23
47	5.21	5.24	1.27
48	0	0	0
49	0	0	0
50	0	0	0
51	0	0	0
52	0	0	0
53	0	0	0
54	0	0	0
55	0	0	0
56	0	0	0
57	0	0	5.20
58	0	0	5.20
59	0	0	5.20
60	0	0	5.20
61	0	0	5.20
62	0	0	5.20
63	0	0	5.20
64	0	0	5.20

PIN NAME	MODE		
	DVD	TV	STANDBY
Q301			
E	5.19	5.22	5.23
C	5.14	5.17	5.19
B	4.53	4.55	4.57

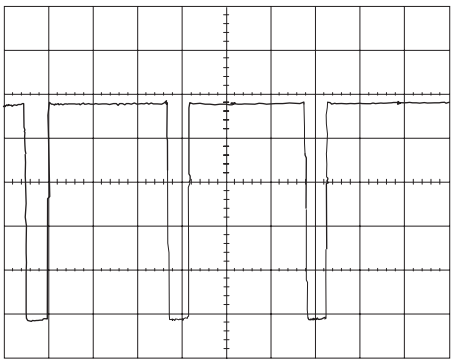
PS-2 C.B

PIN NO.	MODE		
	DVD	TV	STANDBY
IC212			
1	2.49	2.49	2.49
2	0	0	0
3	3.76	3.73	3.72
IC213			
1	9.16	9.16	0
2	0	0	0
3	17.6	15.3	0.47
IC214			
1	12.0	12.0	12.0
2	0	0	0
3	017.6	15.3	15.2

PIN NAME	MODE		
	DVD	TV	STANDBY
Q211			
E	17.6	15.3	15.2
C	17.6	15.3	0.44
B	16.9	14.6	15.2
Q212			
E	0	0	0
C	0.06	0.06	15.2
B	5.20	5.23	0
Q213			
E	11.2	9.78	10.3
C	11.2	9.76	0
B	10.5	9.07	10.3
Q214			
E	0	0	0
C	0	0.02	10.3
B	5.20	5.22	0
Q217			
E	5.23	5.25	5.25
C	5.17	5.19	-32.2
B	1.27	1.30	5.25
Q218			
E	5.22	5.25	5.25
C	5.10	5.14	-5.47
B	1.27	1.30	5.25
Q219			
E	5.22	5.25	5.25
C	5.20	5.22	0
B	1.27	1.30	5.25
Q220			
E	-36.4	-31.1	-32.2
C	-36.3	-31.0	0.64
B	-35.6	-30.3	-32.2
Q221			
E	-30.1	-25.1	-5.48
C	-30.0	-25.0	2.53
B	-29.3	-24.3	-5.48
Q222			
E	5.22	5.25	5.25
C	5.12	0.99	0
B	4.47	5.25	5.25
Q223			
E	0	0	0
C	0.05	5.25	5.25
B	5.12	0	0
Q224			
E	1.28	1.30	5.25
C	0	0	0
B	0	0	5.24
Q225			
E	4.34	4.59	0
C	4.34	-1.57	-1.29
B	0	4.55	0
Q226			
E	0	0	0
C	0	4.55	0
B	5.11	0	0

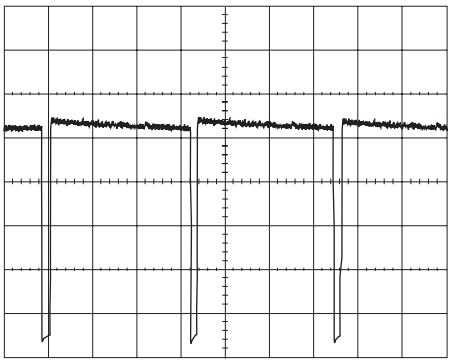
WAVEFORM

① IC1 PIN 1 ($\overline{\text{BLK H}}$)



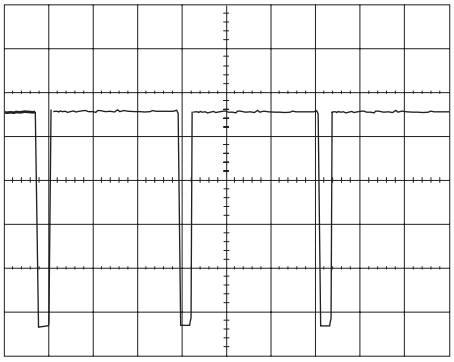
1 V/div
20 µs/div

② IC1 PIN 2 ($\overline{\text{BLK V}}$)



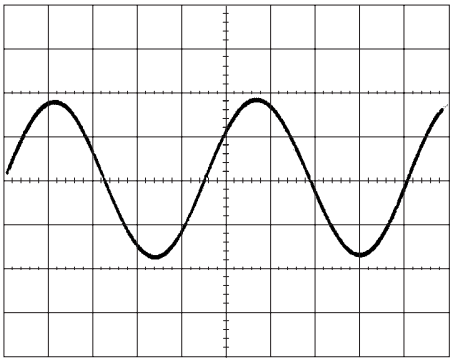
1 V/div
5 ms/div

③ IC1 PIN 11 ($\overline{\text{SD}}$)



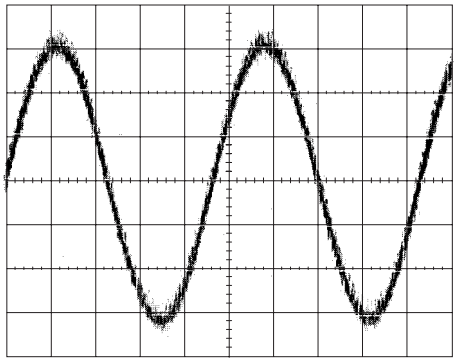
1 V/div
20 µs/div

④ IC701 PIN 2 (TVOUT-L)



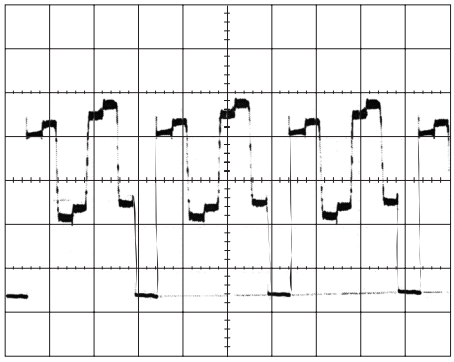
0.1 V/div
0.2 ms/div

⑤ Q202 EMITTER



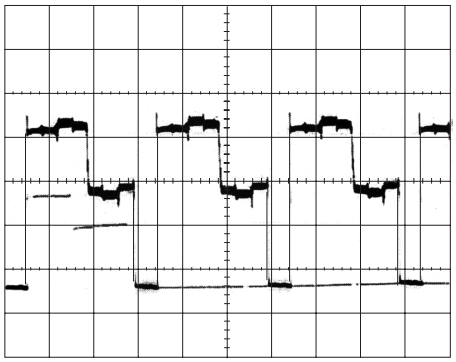
0.1 V/div
0.2 ms/div

⑥ IC301 PIN 19 (R OUT)



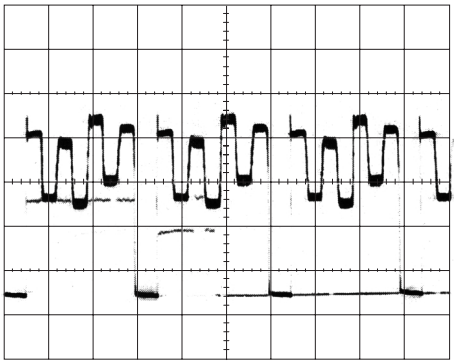
1 V/div
20 µs/div

⑦ IC301 PIN 20 (G OUT)



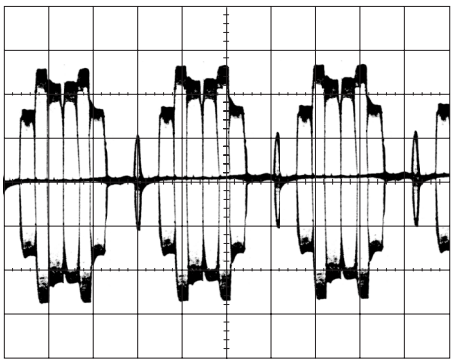
1 V/div
20 µs/div

⑧ IC301 PIN 21 (B OUT)



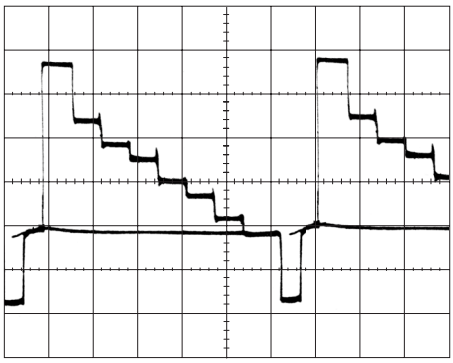
1 V/div
20 µs/div

⑨ IC301 PIN 45 (CHROMA IN)



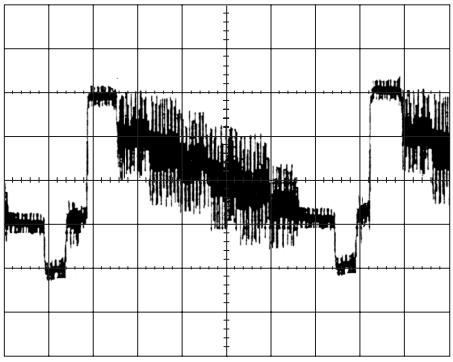
0.1 V/div
20 µs/div

⑩ IC301 PIN 43 (Y IN)



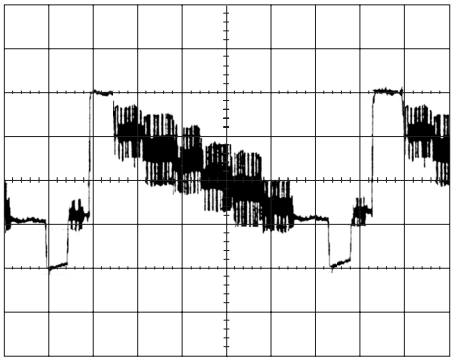
0.2 V/div
10 µs/div

⑪ IC301 PIN 47 (TV DET OUT)



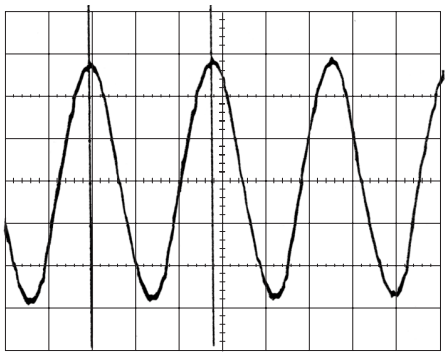
0.5 V/div
10 µs/div

⑫ IC407 PIN 4 (V-IN)



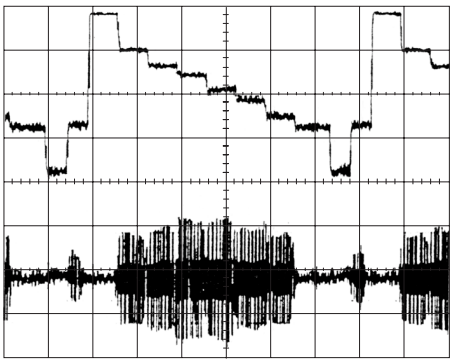
0.2 V/div
10 µs/div

⑬ IC407 PIN 10 (FSC-IN)



0.2 V/div
0.1 µs/div

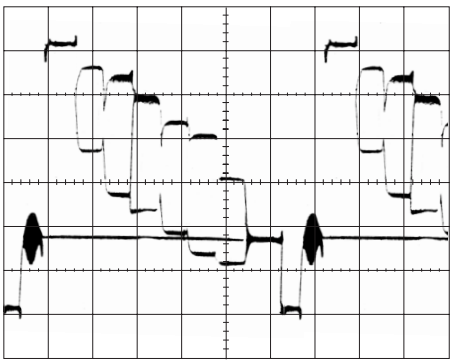
⑭ IC407 PIN 13 (C-OUT)
⑮ IC407 PIN 15 (Y-OUT)



0.5 V/div
10 µs/div

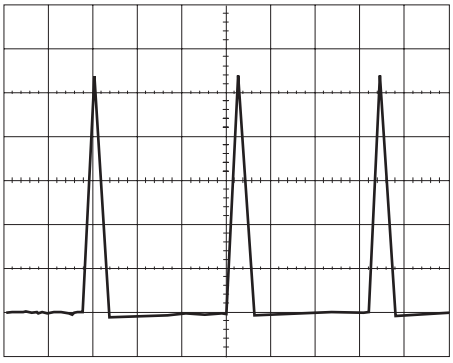
0.2 V/div
10 µs/div

⑯ Q309 EMITTER



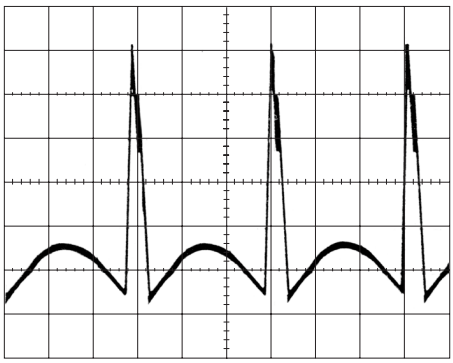
0.2 V/div
10 µs/div

⑰ CN601 PIN 1 (H+)



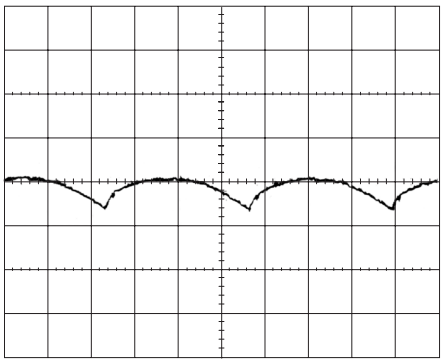
200 V/div
20 µs/div

⑱ CN601 PIN 2 (H-)



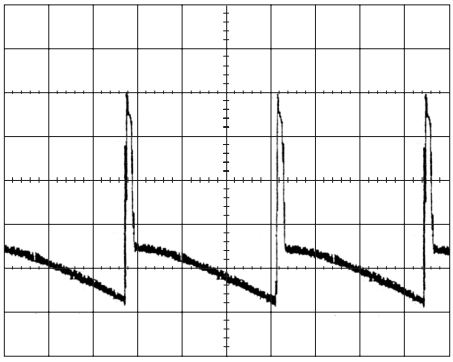
50 V/div
20 µs/div

⑲ CN601 PIN 4 (V-)



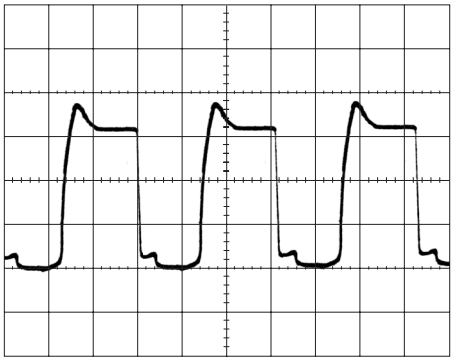
5 V/div
5 ms/div

⑳ CN601 PIN 5 (V+)



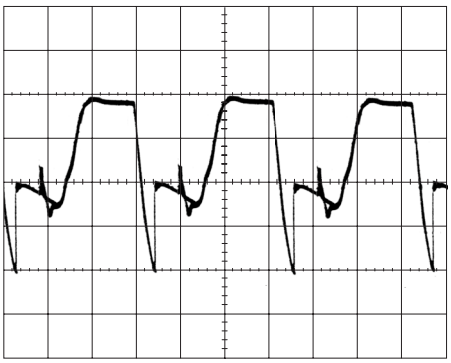
10 V/div
5 ms/div

㉑ Q601 COLLECTOR



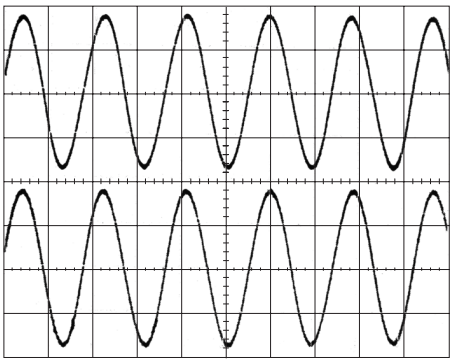
50 V/div
20 µs/div

㉒ T602 PIN 3



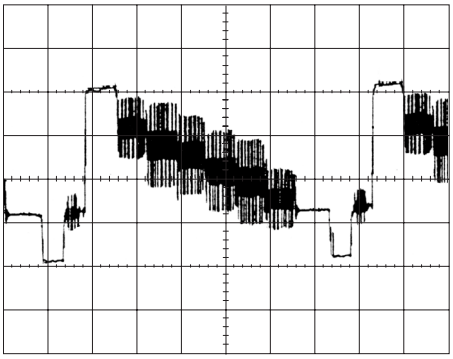
20 V/div
20 µs/div

㉓ Q751 (EMITTER)
㉔ Q752 (EMITTER)



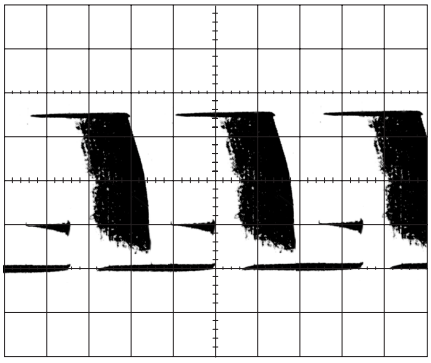
0.2 V/div
0.5 ms/div

㉕ J702 (VIDEO OUTPUT)



0.5 V/div
10 µs/div

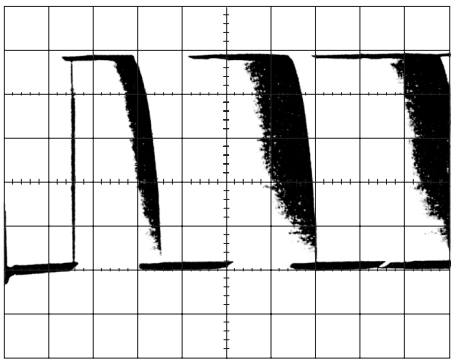
㉖ D823 ANODE (at POWER ON)



10 V/div
5 µs/div

㉗ D827 ANODE (at POWER ON)

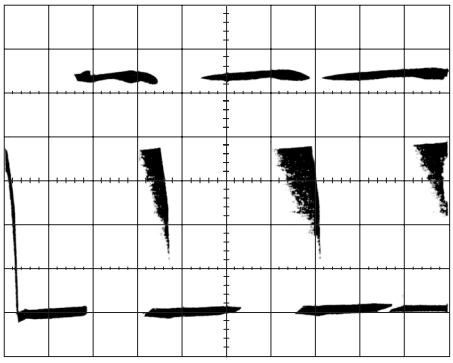
㉗



50 V/div
5 µs/div

㉘ D822 ANODE (at POWER ON)

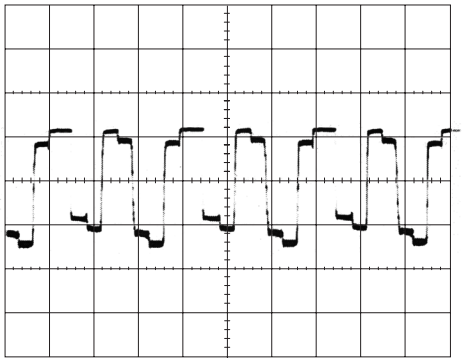
㉘



5 V/div
5 µs/div

㉙ Q901 COLLECTOR (R-DRIVE)

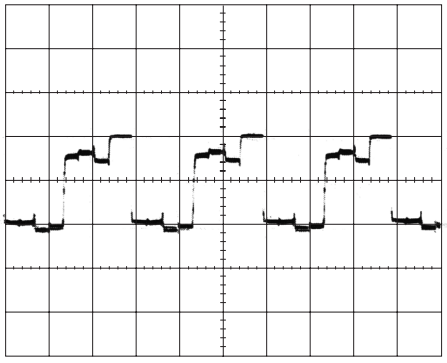
㉙



50 V/div
20 µs/div

㉚ Q902 COLLECTOR (G-DRIVE)

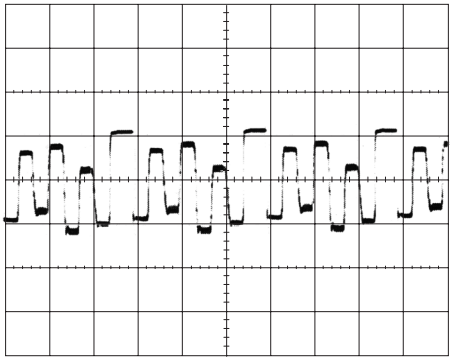
㉚



50 V/div
20 µs/div

㉛ Q903 COLLECTOR (B-DRIVE)

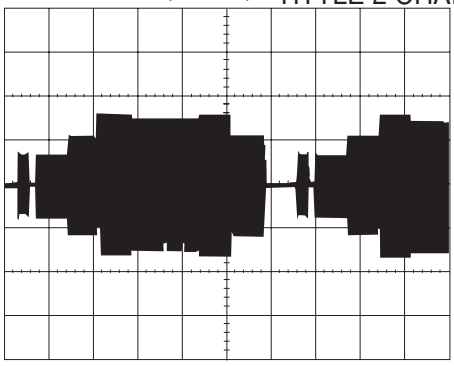
㉛



50 V/div
20 µs/div

㉜ CN108 PIN 1 (S-CIN) DVD PLAY (TDV-540 TITTLE 2 CHAPTER 1)

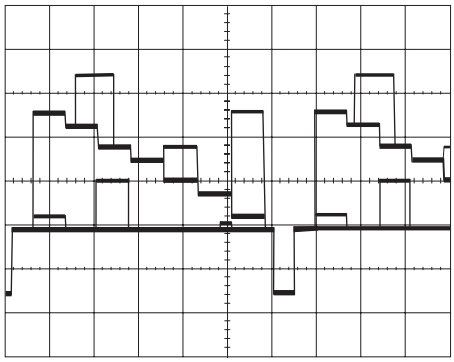
㉜



2 V/div
10 µs/div

㉝ CN108 PIN 3 (S-YIN) DVD PLAY (TDV-540 TITTLE 2 CHAPTER 1)

㉝

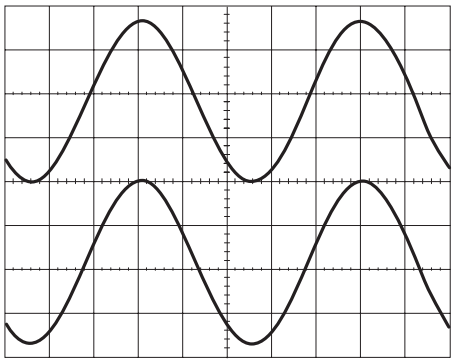


2 V/div
10 µs/div

㉞ CN108 PIN 5 (V2-RIN) DVD PLAY (TDV-540
㉟ CN108 PIN 6 (V2-LIN) TITTLE 2 CHAPTER 1)

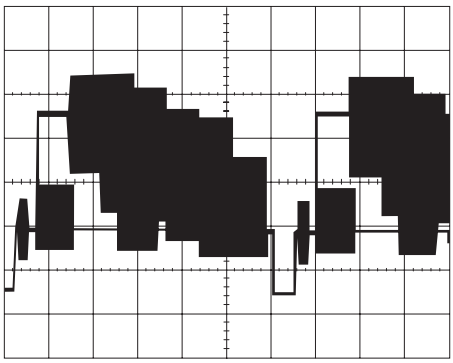
㉞

㉟



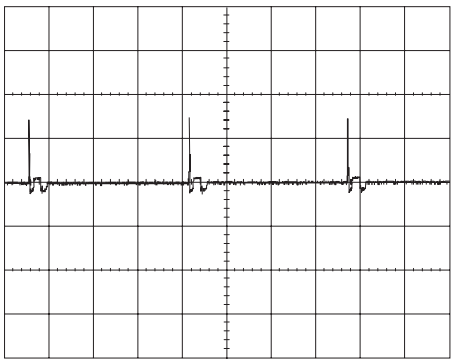
5 V/div
2 ms/div

㊱ CN108 PIN 8 (V2-VIN)



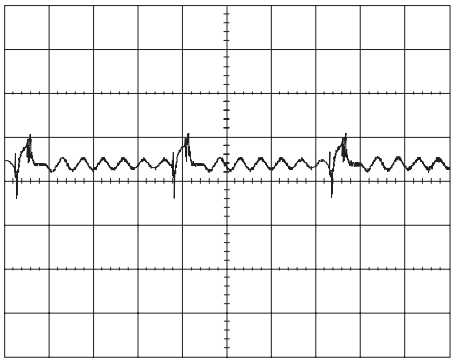
2 V/div
10 µs/div

㊳ IC211 PIN 2 (S) MODE : P-STBY



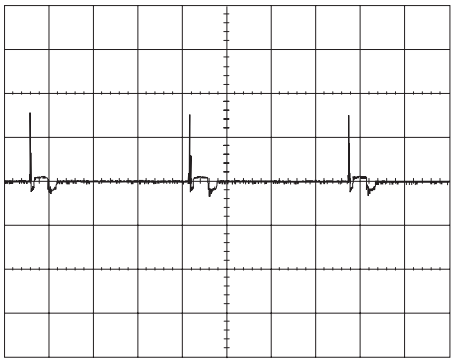
5 V/div
5 µs/div

㊲ IC211 PIN 1 (OCP / FB) MODE : P-STBY



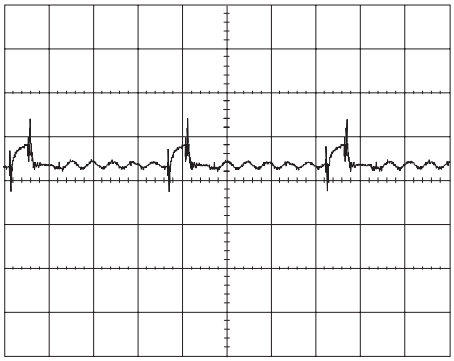
1 V/div
5 µs/div

㊳ IC211 PIN 2 (S) MODE : TV



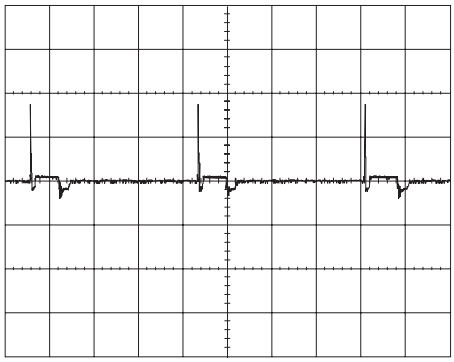
5 V/div
5 µs/div

㊲ IC211 PIN 1 (OCP / FB) MODE : TV



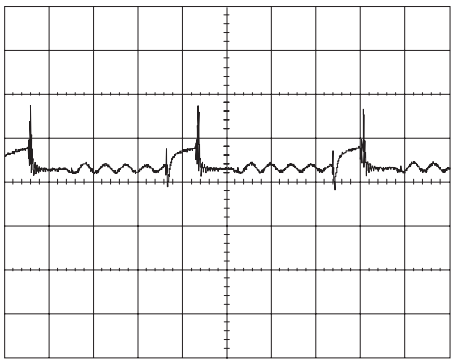
1 V/div
5 µs/div

㊳ IC211 PIN 2 (S) MODE : DISC



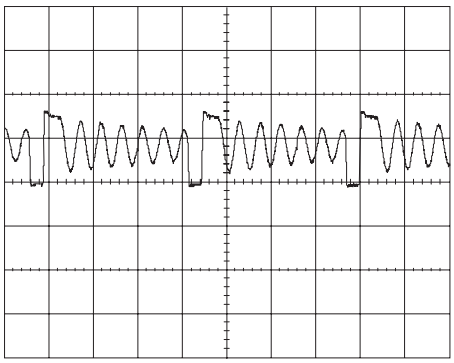
5 V/div
5 µs/div

㊲ IC211 PIN 1 (OCP / FB) MODE : DISC



1 V/div
5 µs/div

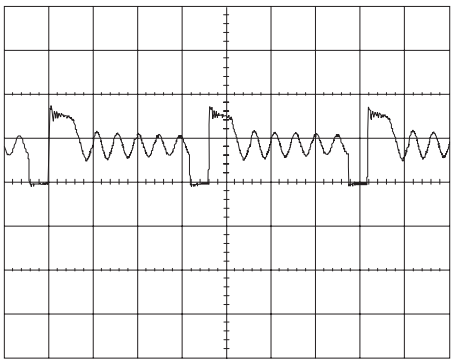
㊴ IC211 PIN 3 (D) MODE : P-STBY



200 V/div
5 µs/div

㊴ IC211 PIN 3 (D) MODE : TV

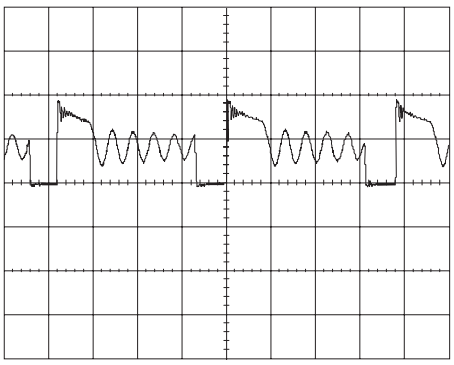
㊴



200 V/div
5 µs/div

㊴ IC211 PIN 3 (D) MODE : DISC

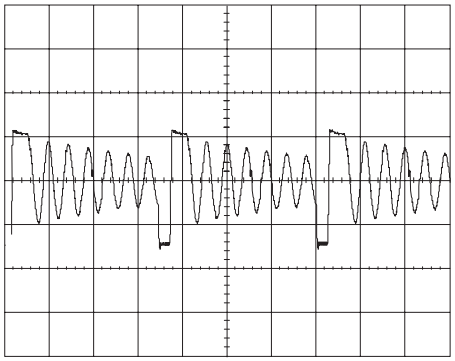
㊴



200 V/div
5 µs/div

㊵ PT211 PIN 11 MODE : P-STBY

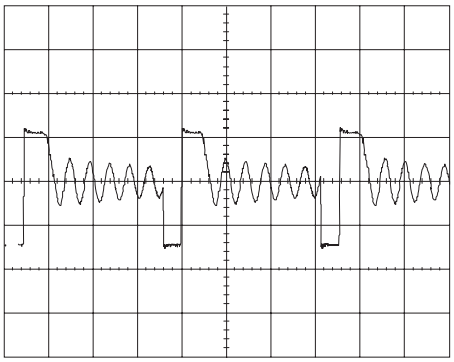
㊵



5 V/div
5 µs/div

㊵ PT211 PIN 11 MODE : TV

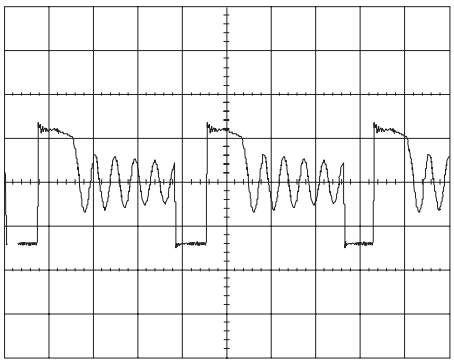
㊵



5 V/div
5 µs/div

㊵ PT211 PIN 11 MODE : DISC

㊵



5 V/div
5 µs/div

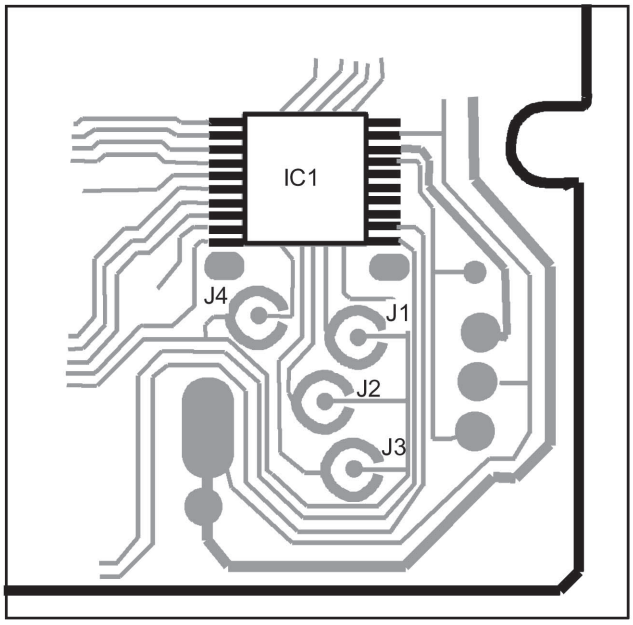
Method of Using the Jig Remote Controller

Most of the video circuit and the deflection circuit of this set can be adjusted by using the jig remote controller.
Jig remote controller: RC-AVC01
The jig remote controller RC-AVC01 has the two operating modes. One is the NORMAL mode and the other is the TEST mode. Either the NORMAL mode or the TEST mode can be selected by short-circuiting or opening the shorting land of the printed foil pattern.
The TEST mode of the jig remote controller is used for adjusting this set.
The NORMAL mode and the TEST mode are selected as described below.

NORMAL/TEST mode selection method:
Disassemble the jig remote controller and locate the shorting land J1 and J2 on the foil pattern of the printed circuit board.

NORMAL mode:
J1 Shorted
J2 Open

TEST mode:
J1 Open
J2 Shorted



When the remote controller enters the TEST mode, its REPEAT key becomes the TEST key and the CAPTION key becomes the FINISH key. All keys other than the above two keys are disabled so that the remote controller will not operate even if any key other than those two keys is pressed.

When the word the TEST key or the FINISH key is written in this Service Manual, it means that the REPEAT key must be pressed instead of the TEST key, and the CAPTION key must be pressed instead of the FINISH key respectively on the actual jig remote controller.

Aging Mode

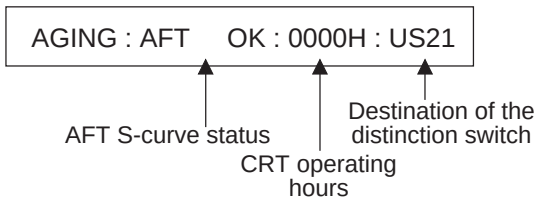
How to enter the aging mode and the contents that are displayed in the aging mode

To enter the aging mode, press the TEST key.

When this set enters the aging mode, the Auto Power Off function that turns off the main power when the input signal is disconnected, is disabled.

The aging mode is used for aging (such as warming up) of this set before starting the CRT adjustment.

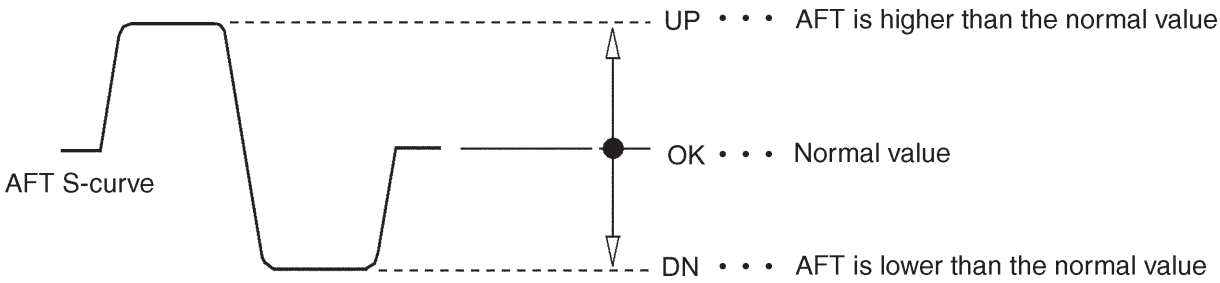
When this set enters the aging mode, the following display appears on CRT screen.



Contents that are displayed on screen in the aging mode

AFT S-curve display (AFT UP, AFT OK, AFT DN)

The message of either UP or OK or DN (DOWN) is displayed in accordance with the status that the AFT S-curve is high or optimum or low.



Accumulative operating hours of CRT ON, are displayed

The operating hours of CRT ON are accumulated in units of hour and are displayed in hexadecimal notation.

Example: 1234H=(1X16X16X16)+(2X16X16)+(3X16)+4= 4660 hours

When the accumulative operating hours exceed 7FFFH (32768 hours), the display returns to 0000H.

Distinction switch destination setting

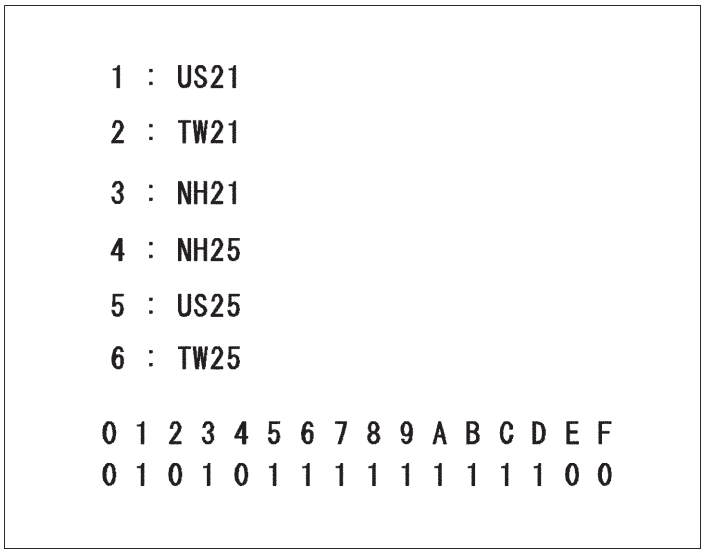
The destination and picture size setups that are set in this set are displayed.

The method of how to set the distinction switch is described in the next section.

How to check and set the distinction switch

When the EEP ROM is going to be replaced, be sure to check and change the distinction switch before starting the EEP ROM replacement as follows.

1. Press the TEST key to enter the aging mode.
2. Press the DISPLAY key to let the DISTINCTION switch appear on screen.
3. Check that "1: US21" is shown in red among 1: US21 to 6: TW25. If "1: US21" is not shown in red, press the numeric ten key "1" on the keyboard so that "1: US21" is shown in red.
4. Check the data contents of the addresses from 0 to F. Confirm that the data contents of the addresses from 0 to F are identical what are shown in the illustration. If the contents are different from what are shown in the illustration, select the data that you want to correct using the CHANNEL UP/DOWN key and change the value (0 or 1) of the selected data using the VOLUME UP/DOWN key.
5. When data input is complete, press the FINISH key.
6. If you press the FINISH key, the message INITIALIZING appears on the screen. This set enters the standby state in eight seconds. (When does this operation, channel presetting etc. are initialized.)
   If you press the TEST key, without the initialize being done the AGING mode ends.



This section described the 16 types of distinction switch and the contents that are set by these distinction switches.

SW	0	1	2	3	4	5	6	7
Contents	CLOCK	OSD	PON	RFAGC	MUTE	MTS	QSUR	WEAK
Setup value	0	1	0	1	0	1	1	1

SW	8	9	A	B	C	D	E	F
Contents	BBE	VMUTE	VOL	VCHIP	CCAP	SBASS	SWOOFER	CHILD
Setup value	1	1	1	1	1	1	0	0

SW_0 "CLOCK" [Selection of the OSD reference clock]

CLOCK=1	External clock. Pins 12 and 24 are used as the external clock ports OSC1 and OSC2
CLOCK=2	During when the normal OSD is displayed -> HSYNC is the reference. ▪ During when the closed caption is ON and during asynchronous mode -> HSYNC is the reference. ▪ During when the closed caption is ON and during synchronous mode -> VIDEO signal is the reference. ▪ During when the closed caption is OFF -> HSYNC is the reference.

SW_1 "OSD" [Selection of the number corresponding to the OSD language]

OSD=0	Eng + Spa
CSD=1	Eng + Spa + French

SW_2 "PON" [Term of the video mute during Power ON]

PON=0	MUTE=2.7sec
PON=1	MUTE=5.4sec

*This setup is not required depending on the production date. In such a case, hyphen "-" is displayed.

SW_3 "RFAGC" [Selection of measure when RFAGC = 0]

REAGC=0	REAGC=0 & wait 200 ms is used
REAGC=1	REAGC=0 & wait 200 ms is not used

When "wait 200 ms is used" is set, 200 ms delay is given after the tuner is switched from external input to tuner and then selection of stations starts.

SW_4 "MUTE" [Selection of audio mute methods]

MUTE=0	LMUTE & VOL=0
MUTE=1	LMUTE

SW_5 "MTS" [Use or not use of MTS]

MTS=0	Used
MTS=1	Not used

When MTS is used, only the remote controller is selected.
When MTS = 0 is selected, the remote controller is disabled and discrimination of audio multiplexing is not implemented.

SW_6 "QSUR" [Use or not use of QSURROUND]

QSUR=0	Used
QSUR=1	Not used

When QSUR = 0 is selected, the remote controller is disabled.
At the same time, the SSURROUND items of the SOUND menu are not displayed.
Then the blank columns are justified for data display.

[VOL]=0, [QSUR]=0, [BBE]=0, [SBASS]=0, [SWOOFER]=0.
In such cases, the SOUND menu is not displayed.

SW_7 "WEAK" [Use or not use of the sound mute under the weak electric field]

WEAK=0	Used
WEAK=1	Not used

SW_8 " BBE" [Selection of BBE]

BBE=0	Used
BBE=1	Not used

In the case of BBE = 0, pin-35 (BBE) outputs the CMOS "H" signal.
When BBE = 0 is selected, the remote controller is disabled.
At the same time, the BBE items of the SOUND menu are not displayed.
Then the blank columns are justified for data display.

[VOL]=0, [QSUR]=0, [BBE]=0, [SBASS]=0, [SWOOFER]=0.
In such cases, the SOUND menu is not displayed.

SW_9 "VMUTE" [Use or not use of the video mute during channel selection]

VMUTE=0	Used
VMUTE=1	Not used

SW_A "VOL" [Selection of VOL IC]

VOL=0	TA1268 is used
VOL=1	TA1216 is used

[VOL]=0, [QSUR]=0, [BBE]=0, [SBASS]=0, [SWOOFER]=0.
In such cases, the SOUND menu is not displayed.

SW_B "VCHP" [Use or not use of V CHIP function]

VCHP=0	Used
VCHP=1	Not used

SW_C "CCAP" [Use or not use of CHANNEL CAPTION function]

CCAP=0	Used
CCAP=1	Not used

SW_D "SBASS" [Selection of SUPER BASS]

SBASS=0	SUPER BASS is not used
SBASS=1	SUPER BASS is used

When SBASS = 0 is selected, the remote controller is disabled.
In such cases, the SUPER BASS item of the SOUND menu is not displayed.
Then the blank columns are justified for data display.
In the case of SW_F [SUBWOOFER] = 1, SW_E [SBASS] is not set to SBASS = 1.

[VOL]=0, [QSUR]=0, [BBE]=0, [SBASS]=0, [SWOOFER]=0.
In such cases, the SOUND menu is not displayed.

SW_E "SWOOFER" [Selection of SUBWOOFER]

SWOOFER=0	SUBWOOFER is not used
SWOOFER=1	SUBWOOFER is used

When SUBWOOFER = 0 is selected, the remote controller is disabled.
In such cases, the SUBWOOFER item of the SOUND menu is not displayed.
Then the blank columns are justified for data display.
In the case of SW_E [SBASS] = 1, SW_F [SWOOFER] is not set to SWOOFER = 1.

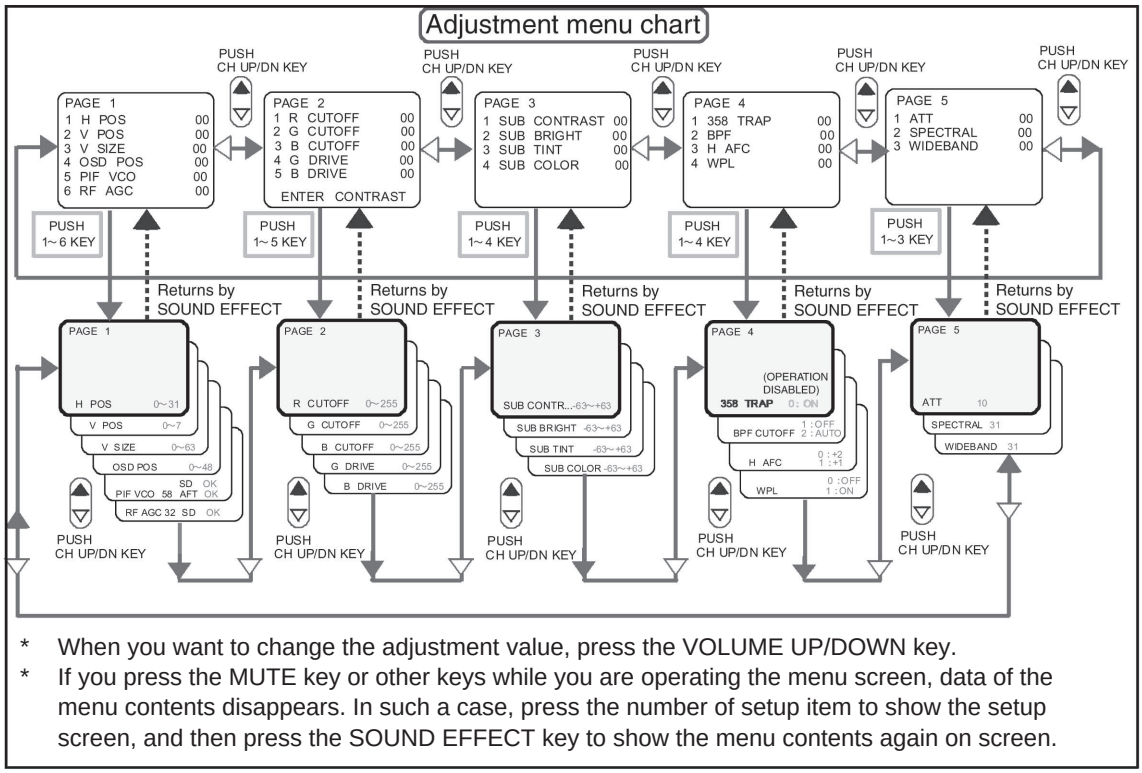
[VOL]=0, [QSUR]=0, [BBE]=0, [SBASS]=0, [SWOOFER]=0.
In such cases, the SOUND menu is not displayed.

SW_F "CHILD" [Use or not use of the CHILD LOCK function]

CHILD=0	CHILD LOCK is not used
CHILD=1	CHILD LOCK is used

How to enter, adjust and terminate the adjustment mode

1. Press the TEST key while the machine is in the aging mode. The adjustment menu display appears on the screen showing the machine is in the adjustment mode.
2. The adjustment pages can be selected by pressing the CHANNEL UP/DOWN key.
3. Press the numeric ten key to select the desired adjustment item.
   Example: When you want to select the adjustment item "1. H POS", select the PAGE1 and press the key 1 on page 1.
4. When you want to change the adjustment value, press the VOLUME UP/DOWN key.
5. When you want to move to the next adjustment item or return to the previous adjustment item, press the CHANNEL UP/DOWN key.
6. When you want to return to the PAGE screen, press the SOUND EFFECT key.
7. When you want to terminate the adjustment mode, press the TEST key.



* When you want to change the adjustment value, press the VOLUME UP/DOWN key.

* If you press the MUTE key or other keys while you are operating the menu screen, data of the menu contents disappears. In such a case, press the number of setup item to show the setup screen, and then press the SOUND EFFECT key to show the menu contents again on screen.

Setting the IIC bus data

Initial value

When the EEP ROM is replaced, enter the following initial value before starting adjustment.
When this set is brought in for normal repair other than the EEP ROM replacement, confirm status of the corresponding item only before starting adjustment.

Adjustment item	Initial value
PAGE 1.	
1. H POS	16
2. V POS	3
3. V SIZE	30
4. OSD POS	6
5. PIF VCO	58
6. RF AGC	32
PAGE 2.	
1. R CUT OFF	127
2. G CUT OFF	127
3.B CUT OFF	127
4. G DRIVE	127
5. B DRIVE	127
PAGE 3.	
1. SUB CONTRAST	-5
2. SUB BRIGHT	+32
3. SUB TINT	+16
4. SUB COLOR	+16
PAGE 4.	Specified value
1. 3.58 TRAP	1 : OFF
2. BPF	2 : AUTO
3. H AFC	1 : +1
4. WPL	0 : OFF
PAGE 5.	
1. ATT	10
2. SPECTRAL	24
3. WIDEBAND	44

Horizontal Picture Position Adjustment

Input signal: Monoscope signal
Measuring equipment: SHIBASOKU TP20A1
Adjustment point: Adjustment menu PAGE 1-1
Adjustment method: Adjust the horizontal position of picture so that the horizontal position scales at the rightmost end and at the leftmost end of a monoscope picture are of equal amount, using the VOLUME UP/DOWN key.

Simplified adjustment procedure

- If a monoscope signal is not available, connect the playback video signal of VTR that plays back TTV-N6T (test tape), to the external video input connector and perform the horizontal picture position adjustment in the same manner as shown above.
- Alternately, connect the cross-hatch output signal of the pattern generator to the external video input connector. Adjust the horizontal picture position so that the dot mark in the center of the cross-hatch signal is positioned at the center of the screen and the number of scales in the right and left on screen are of equal amount as shown in the illustration, using the VOLUME UP/DOWN key.

Horizontal Picture Size Adjustment

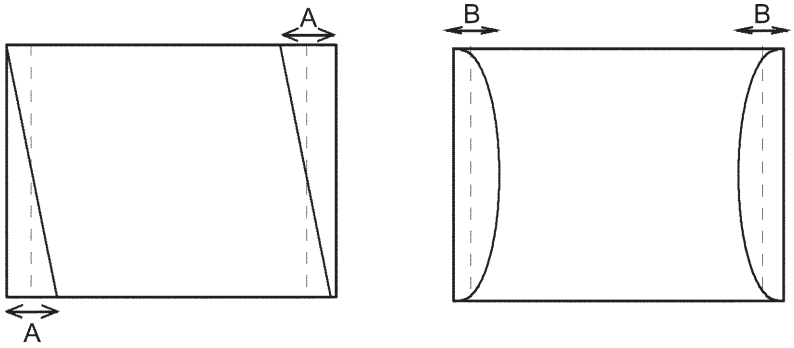
Input signal: Monoscope signal
Measuring equipment: SHIBASOKU TP20A1
Adjustment point: SFR601
Adjustment method: Adjust the horizontal picture size so that the horizontal position scales at the rightmost end and at the leftmost end of a monoscope picture are 5.5±0.5 scales using SFR601.

Simplified adjustment procedure

- If a monoscope signal is not available, connect the playback video signal of VTR that plays back TTV-N6T (test tape), to the external video input connector and perform the horizontal picture size adjustment in the same manner as shown above.
- Alternately, connect the cross-hatch output signal of the pattern generator to the external video input connector. Adjust the horizontal picture size so that the number of scales from the center of the screen to the rightmost end and the number scales from the center to the leftmost end on screen are of equal amount (8 to 9 scales) using the VOLUME UP/DOWN key.

Pin and Barrel Adjustment

Input signal: Cross-hatch signal
Measuring equipment: Pattern generator
Adjustment point: Pin-SFR602, Barrel-SFR603
Adjustment method: Adjust the pin and barrel distortion of picture so that the areas A and B in the following illustration become minimum at both the rightmost end and leftmost end of the cross-hatch display, using SFR602 and SFR603.



Vertical Picture Position Adjustment

Input signal: Monoscope signal
Measuring equipment: SHIBASOKU TP20A1
Adjustment point: Adjustment menu PAGE 1-2
Adjustment method: Adjust the vertical position of picture so that the V-CENTER line at the center of the monoscope picture is positioned at the center mark using the VOLUME UP/DOWN key of the jig remote controller. The vertical picture position adjustment and the V LINEARITY adjustment must be performed together alternately. Repeat the vertical picture position adjustment and the V LINEARITY adjustment each other a few times so that the number of scales in the topmost end and the bottommost end are of equal amount when the center line is positioned at the center mark.

Simplified adjustment procedure

- If a monoscope signal is not available, connect the playback video signal of VTR that plays back TTV-N6T (test tape), to the external video input connector and perform the horizontal picture position adjustment in the same manner as shown above. Alternately, connect the cross-hatch output signal of the pattern generator to the external video input connector. Adjust the horizontal picture position so that the V-CENTER line at the center of the monoscope picture is positioned at the center mark using the VOLUME UP/DOWN key of the jig remote controller.

Vertical Linearity Adjustment

Input signal: Monoscope signal
Measuring equipment: SHIBASOKU TP20A1
Adjustment point: SFR501
Adjustment method: Adjust the vertical linearity so that the number of vertical position scales at the topmost end and at the bottommost end are of equal amount using SFR501. The vertical linearity adjustment and the vertical picture position adjustment must be performed together alternately. Repeat the vertical picture position adjustment and the vertical linearity adjustment each other a few times so that the number of scales in the topmost end and the bottommost end are of equal amount when the center line is positioned at the center mark.

Simplified adjustment procedure

- If a monoscope signal is not available, connect the playback video signal of VTR that plays back TTV-N6T (test tape), to the external video input connector and perform the horizontal picture position adjustment in the same manner as shown above.
- Alternately, connect the cross-hatch output signal of the pattern generator to the external video input connector. Adjust the vertical linearity so that the number of vertical position scales at the topmost end and at the bottommost end are of equal amount using SFR501.

Vertical Picture Size Adjustment

Input signal: Monoscope signal
Measuring equipment: SHIBASOKU TP20A1
Adjustment point: Adjustment menu PAGE 1 "3. V. SIZE"
Adjustment method: Adjust the vertical picture size so that the vertical position scales at the topmost end and at the bottommost end of a monoscope picture are 4.5±0.5 scales using the VOLUME UP/DOWN key of the jig remote controller.

Simplified adjustment procedure

- If a monoscope signal is not available, connect the playback video signal of VTR that plays back TTV-N6T (test tape), to the external video input connector and perform the horizontal picture size adjustment in the same manner as shown above.
- Alternately, connect the cross-hatch output signal of the pattern generator to the external video input connector. Adjust the vertical picture size so that the pattern of the cross-hatch screen becomes complete square using the VOLUME UP/DOWN key of the jig remote controller.

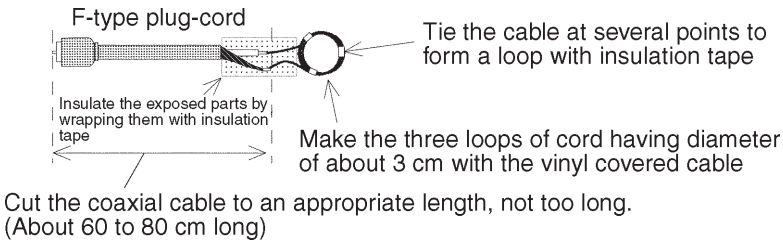
OSD Position Adjustment

Input signal: No input signal is required
Adjustment point: Adjustment menu PAGE 1-4
Adjustment method: Adjust the OSD position so that the crossing (+) mark on both sides of the OSD are positioned in the same distance from the both ends of screen, using the VOLUME UP/DOWN key of the jig remote controller.

PIF VCO Adjustment

Note: Be sure to perform the PIF VCO adjustment whenever the VCO coil (L205) is replaced.
Measuring equipment: Spectrum analyzer, search coil

The method how to manufacture the search coil


F-type plug-cord
Tie the cable at several points to form a loop with insulation tape
Insulate the exposed parts by wrapping them with insulation tape
Make the three loops of cord having diameter of about 3 cm with the vinyl covered cable
Cut the coaxial cable to an appropriate length, not too long.
(About 60 to 80 cm long)

Setting the spectrum analyzer

Center frequency:	45.75 MHz
Reference:	60 dBµV/ Should be determined by the amplitude of waveform
Span:	10 MHz
Marker:	Set the markers so that the peak marker function can be used.

Adjustment method

1. Allow 30 minutes or more of aging time of this set.
2. When an antenna is connected to the antenna terminal, remove an antenna.
3. Connect pin-5 of IC301 to ground using a wire.
4. Connect the search coil that is locally manufactured to a spectrum analyzer. Move the tip of the spectrum analyzer to L205.
5. Adjust L205 so that the peak is positioned at 45.75 MHz±50 kHz on a spectrum analyzer.

Note 1: Be careful that the search coil does not touch the VCO coil or its leads.
Note 2: Take reading of the spectrum analyzer value when the adjustment screwdriver is removed from the VCO coil.
Note 3: Press the marker peak key of a spectrum analyzer. Read the value when the marker peak key is pressed and adjust the value for 45.75 MHz. The value cannot be read again even if the marker peak key is pressed until the cursor completes a full scan of tracing over the waveform on a spectrum analyzer display.
(The value can be read only once during one scan. The value remains the same even if the marker peak key is pressed before the scan is completed.)

Simplified adjustment procedure

Input signal:	Color bars (RF)
Measuring equipment:	Pattern generator
Adjustment point:	Adjustment menu PAGE 1-5, L205
Adjustment method:	Select the adjustment menu PAGE 1-5 "RF VCO". Set the RF VCO value to 58. Adjust L205 so that the normal color bar picture and the message AFT OK appear on display. When doing this, adjust L205 for the center of AFT OK lock-in range as close to the center as possible.

SIF Adjustment

Note: Be sure to perform this adjustment whenever the SIF coil (L201) is replaced.

Simplified adjustment procedure

Input signal:	Normal off-the-air broadcast
Measuring equipment:	Oscilloscope
Adjustment point:	L201
Test point:	IC301 pin-54
Adjustment method:	Adjust L201 so that the center value of the audio signal waveform at IC301 pin-54 becomes 4.5±0.2 Vdc.

RF AGC Adjustment

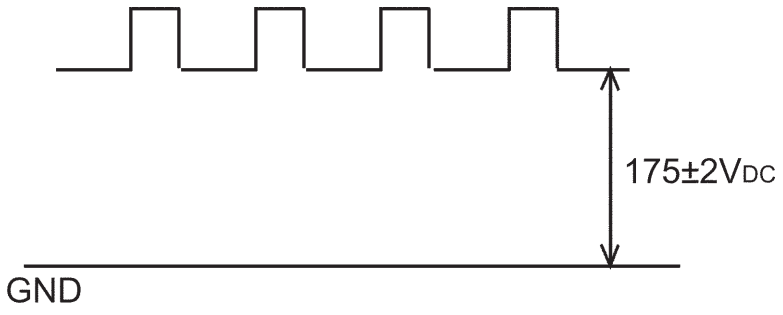
Input signal:	RF input
Input level:	60 dBµV, P/S 7 dB
Channel:	11 CH (fp = 199.25 MHz)
Video:	Color bars (full field)
Audio:	400 Hz
Modulation degree:	Video 87.5%, audio 100% (±25 kHz deviation)
Measuring equipment:	Pattern generator, oscilloscope
Test point:	TP101, RF AGC
Adjustment point:	Adjustment menu PAGE 1-6
Adjustment method:	Connect an oscilloscope to TP 101. Adjust the voltage at the test point for 4.0±0.5 Vp-p using the jig remote controller VOLUME UP/DOWN keys.

SCREEN VOLTAGE Adjustment

Note: Be sure to perform the WHITE BALANCE Adjustment whenever the SCREEN VOLTAGE Adjustment is performed.

Input signal:	No input signal
Measuring equipment:	Oscilloscope
Test point:	SO901 R, G, B
Adjustment point:	Adjustment menu PAGE 2-1, 2-2, 2-3 SCREEN VR (FBT: T601)
Adjustment method:	

1. Connect an oscilloscope to SO901 R (R cathode). Adjust the adjustment menu PAGE 2-1 "1. R CUTOFF" so that the voltage as shown in the illustration becomes 175±2 V.
2. Perform the SCREEN VOLTAGE adjustment for the G and B channels in the same manner as step 1 for the R channel.
3. Press the numeric key "0" of the jig adjustment remote controller on the adjustment menu screen so that the horizontal single line display on the screen.
4. Adjust the SCREEN VR to the point where the horizontal single line display just starts illuminating.
5. Press the numeric key "0" of the jig remote controller to return to the menu screen.



FOCUS Adjustment

Input signal:	Dot-pattern signal
Measuring equipment:	Pattern generator
Adjustment point:	FOCUS VR (FBT:T601)
Adjustment method:	Adjust the FOCUS VR (FBT:T601) for optimum focus on the dot pattern screen.

White Balance Adjustment

Note: Allow 20 minutes or longer of warm-up time before starting the white balance adjustment. Repeat the entire steps of the white balance adjustment several times until all three channels of red, green and blue are balanced each other.

Input signal: White raster
Measuring equipment: Pattern generator
Adjustment point: Adjustment menu PAGE 2-1 to PAGE 2-5
Adjustment method:

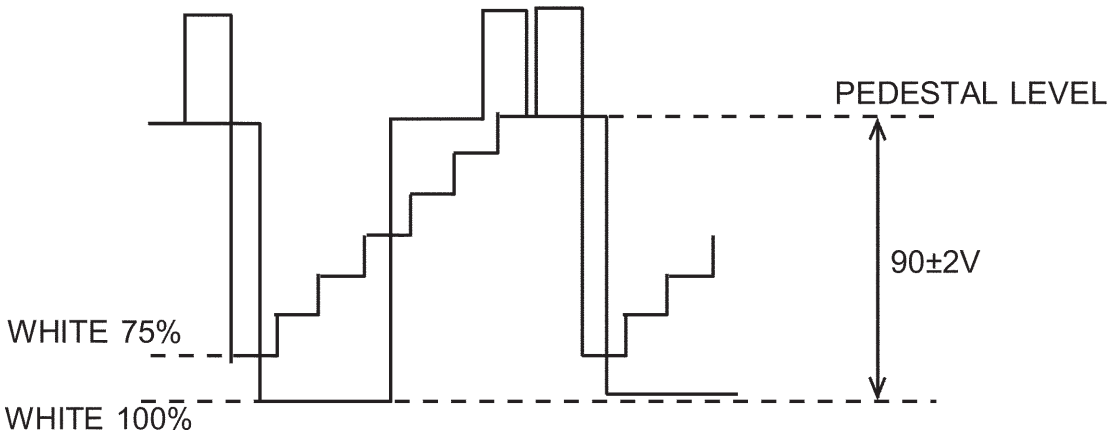
1. Connect the white raster signal from the pattern generator to the input.
2. Find out which color is most strongly illuminating among the three colors of red, green and blue. Set the cut-off value of the color that you have selected as the most strongly illuminating color, to 127 as the fixed value. Adjust the cut-off values of the remaining two colors until the optimum white balance is obtained on screen using the VOLUME UP/DOWN keys of the jig remote controller.
3. Select the adjustment menu 2-4 G. DRIVE and increase the G DRIVE value to 200 or higher using the VOLUME UP/DOWN keys of the jig remote controller. The screen will get greenish.
4. Then start decreasing the G DRIVE value using the jig remote controller until the green color looks as if it is lost.
5. Select the adjustment menu 2-5 B. DRIVE and increase the B DRIVE value to 200 or higher using the VOLUME UP/DOWN keys of the jig remote controller. The screen will get bluish.
6. Then start decreasing the G DRIVE value using the jig remote controller until the blue color looks as if it is lost.
7. Repeat the above steps 1 to 6 several times until white balance is obtained.

SUB BRIGHTNESS Adjustment

Input signal: Color bars (stair step)
Measuring equipment: Pattern generator
Adjustment point: Adjustment menu PAGE 3-2
Adjustment method: Adjust SUB BRIGHTNESS so that the second scale (second step) from the right of the stair step signal just starts illuminating using the VOLUME UP/DOWN keys of the jig remote controller.

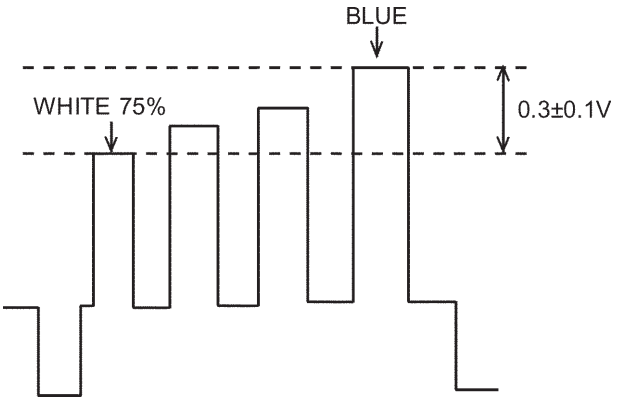
SUB CONTRAST Adjustment

Input signal: Color bars (Q/W, white/100%, chroma/OFF)
Measuring equipment: Oscilloscope, pattern generator
Test point: SO901 R (R cathode)
Adjustment point: Adjustment menu PAGE 3-1
Adjustment method: Connect an oscilloscope to SO901 R (R cathode). Adjust the SUB CONTRAST so that the 100% white voltage from the pedestal is 90±2 V using the jig remote controller VOLUME UP/DOWN keys.



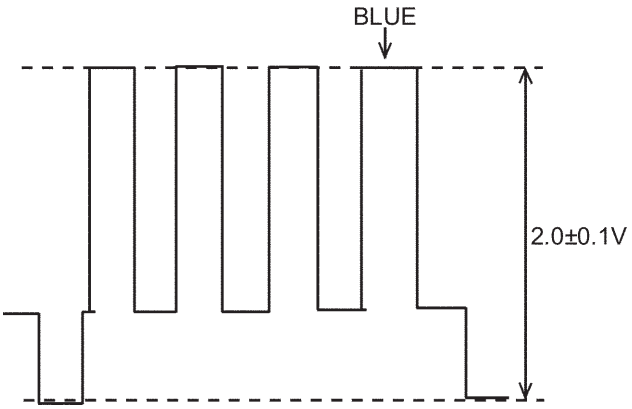
SUB COLOR Adjustment

Input signal:	Color bars (full field, white/100%)
Measuring equipment:	Oscilloscope, pattern generator (Leader 408NPS)
Test point:	CN901 pin-3
Adjustment point:	Adjustment menu PAGE 3-4
Adjustment method:	Connect an oscilloscope to CN901. Adjust the SUB COLOR so that the white (75%) line and the blue line are aligned to a single straight line using the jig remote controller VOLUME UP/DOWN keys. The white (75%) line and the blue line must be aligned to a single straight line within 0.3±0.1 V difference.



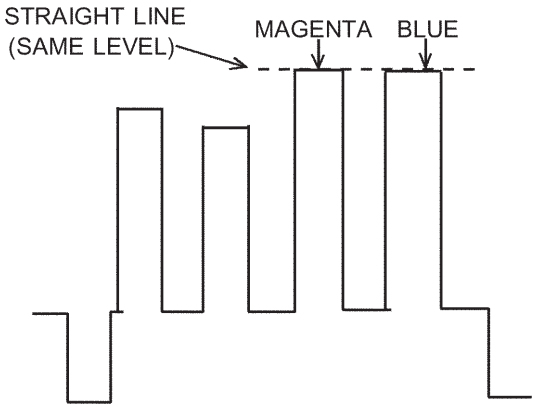
Simplified adjustment procedure

Input the blue raster signal instead of the color bar signal. Adjust the voltage between the pedestal level to the blue peak for 2.0 V±0.1 V using the jig remote controller VOLUME UP/DOWN keys as shown.



SUB TINT Adjustment

Input signal: Color bars (full field, white/75%)
Measuring equipment: Oscilloscope, pattern generator (Leader 408NPS)
Test point: CN901 pin-3
Adjustment point: Adjustment menu PAGE 3-3
Adjustment method: Connect an oscilloscope to CN901. Adjust the SUB TINT so that the magenta line and the blue line are aligned to a single straight line using the jig remote controller VOLUME UP/DOWN keys.



TV Setting Data

Contents of the TV setting data are fixed to the respective models.
Do not make any settings other than what are specified below.
Confirm that the contents of the adjustment menu are identical to the following table.

3.58 TRAP	0 : ON
BPF	2 : AUTO
H AFC	1 : +1
WPL	0 : OFF

If the contents of the adjustment menu are not the same as what are shown in the above table, return the contents to what are shown in the table using the VOLUME UP/DOWN keys of the jig remote controller.

ATT Adjustment

Input signal: RF input
Input level: 60 dBµ, P/S 7 dB
Channel: Not specified
Video: Not specified
Audio: 100 Hz (Monaural)
Modulation degree: Video 87.5%, audio 100% (±25 kHz deviation)
Measuring equipment: Pattern generator, NTSC US MPX, VTVM
Test point: IC701 pin-2
Adjustment point: Adjustment menu PAGE 5-1
Adjustment method: Adjust ATT so that the voltage at IC701 pin-2 beomces 490 mV±20 mV rms using the VOLUME UP/DOWN keys of the jig remote controller.

STEREO SEPARATION Adjustment

Input signal: Stereo test signal from audio generators-1 and -2
Input level: 60 dBµ, P/S 7 dB
Channel: 11 CH (fp = 199.25 MHz)
Video: Color bars (1 Vp-p, modulation degree 87.5%)
Audio: 400 Hz±25 kHz deviation

Setting the audio generator-1

L-CH only
300 Hz, ±7.5 kHz deviation
STEREO, NR: ON

Setting the audio generator-2

L-CH only
3 kHz, ±7.5 kHz deviation
PRE-EMP: ON
Other setups are the same as those of audio generator-1.

Measuring equipment: Pattern generator, NTSC US MPX, VTVM
Test point: IC701 pin-1
Adjustment point: Adjustment menu PAGE 5-2 (WIDEBAND), 5-3 (SPECTRAL)

Adjustment method:

1. Establish the "Setting the audio generator-1". Adjust the voltage at IC701 pin-1 so that the voltage is minimized by changing the WIDEBAND value on PAGE 5-2 using the VOLUME UP/DOWN keys of the jig remote controller.
2. Establish the "Setting the audio generator-2". Adjust the voltage at IC701 pin-1 so that the voltage is minimized by changing the SPECTRAL value on PAGE 5-3 using the VOLUME UP/DOWN keys of the jig remote controller.

ON THE DEFAULT MODE WHEN SHIPPED FROM THE FACTORY

Various settings can be returned to the default mode when shipped from the factory by performing the following procedure.

1) Turn ON the main power and enter the DVD mode.
2) Eject all discs to establish the NO DISC state and wait until the DISC READING is completed.
3) Keep pressing the DISC button and the BACK SKIP buttons at the same time until the aiwa wall paper disappears on the display. When the aiwa wall paper disappears, remove the hands pressing the buttons. (It takes about 4 to 5 seconds.)
4) The aiwa wall paper appears again and the message "AL CLEAR" appears on the FL display.
5) Turn OFF the main power. This is the end of the procedure.

DVD TEST MODE

1. How to Start Up Test Mode

While pressing the DISC button of the main unit, turn ON the power switch (main switch). At this time, keep pressing the DISC button until all the indicators on the FL display tube light. (Refer to the following figure.)

After all the indicators on the FL display tube light for three minutes or longer, the display changes to the status display or the media display.

2. How to Quit Test Mode

Turn OFF the power switch of the main unit or that of the remote control unit.

3. Functions

- Status display and media display
  After the DVD test mode starts up, the display of the FL tube changes to "SxxMxx".

"Sxx" shows the status.

Status	Contents
S41	STOP status of pickup at inner circumference
S42	STOP status of pickup at inner circumference with resume data
S43	PLAY status
S44	PAUSE status
S45	SKIP status
S46	The status in which TOC reading is in progress
S47	The signal that shows the end of the EEPROM write (This is not displayed in this model.)
S48	Indication that status has not been determined yet
S49	Indication of DISC END

"Mxx" shows the type of media.

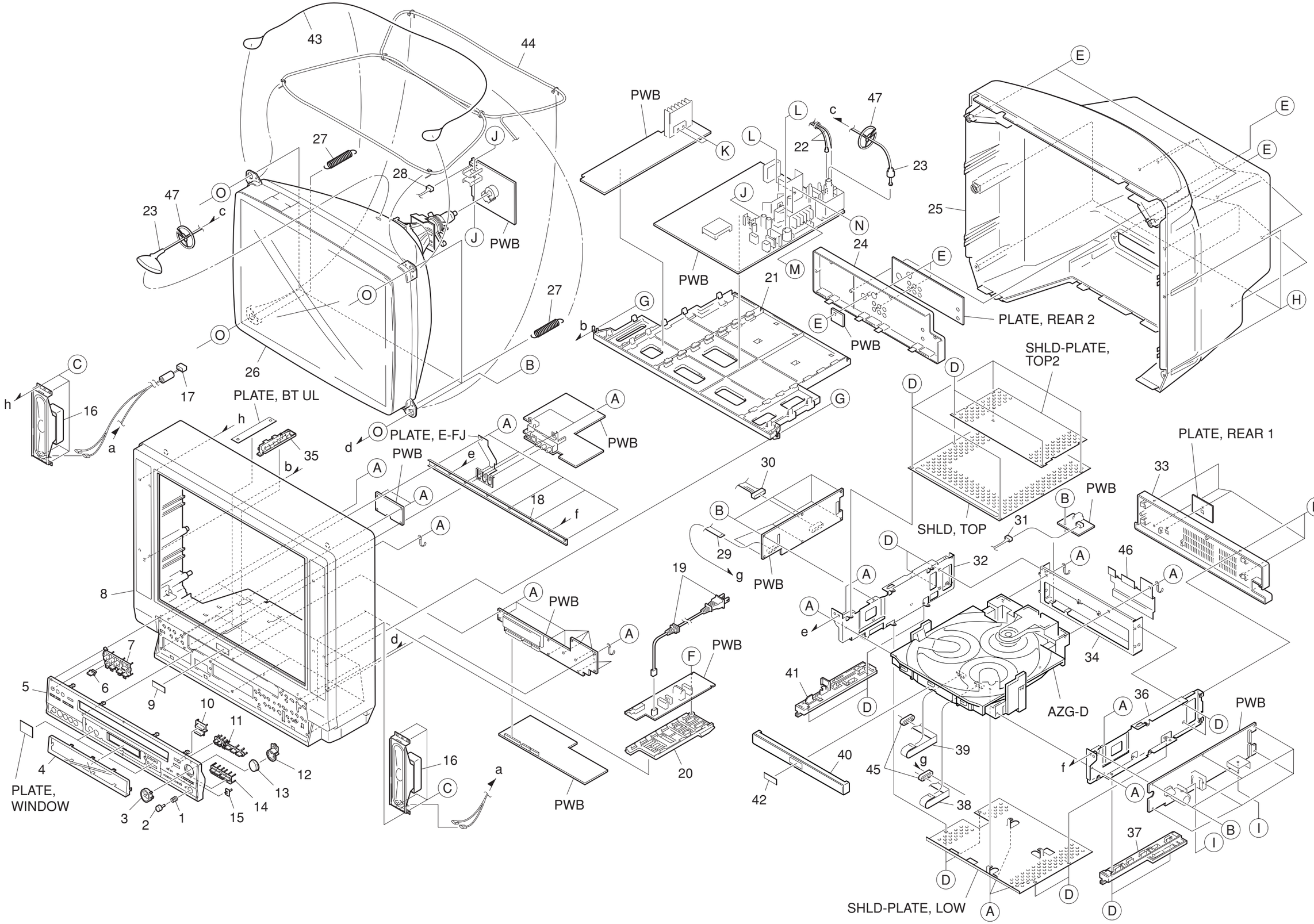
Media type	Contents
M21	NO DISC
M22	CD-DA
M23	VCD (Ver1.0 or Ver1.1)
M24	VCD (Ver2.0)
M25	DVD

When any status (any number) other than what are shown in the above tables is displayed, the data is the illegal data.
Display example:

The following display has the following meaning.

S41 STOP
M21 NO DISC

MECHANICAL EXPLODED VIEW 1 / 1



MECHANICAL PARTS LIST 1 / 1

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8A-JD1-215-010		SPR-C,POWER
2	8A-JD1-013-010		BTN,POWER
3	8A-JD1-011-010		COVER, PLAY KEY
4	8A-JD1-006-010		WINDOW,DISPLAY DVD
5	8A-JD1-002-010		PANEL,MAIN
6	8A-JD1-014-010		LENS,SCREEN
7	8A-JD1-007-010		KEY,SCREEN
8	8A-JD1-001-010		CABI,FR
9	8Z-JE7-008-010		BADGE,AIWA ST 52.5
10	8A-JD1-010-010		KEY,STOP
11	8A-JD1-008-010		KEY,MAIN
12	8A-JD1-201-010		KEY,PLAY
13	8A-JD1-012-010		BTN,PLAY
14	8A-JD1-009-010		KEY,VOL
15	8A-JD1-015-010		LENS,LED
16	8A-JD1-681-010		SPKR,F4*1680HM
17	8A-JD1-648-010		CONN ASSY,4P SPEAKER
18	8A-JD1-208-010		FRAME,MECH FR
⚠ 19	8A-JE5-616-010		AC CORD ASSY,USA LK
20	8A-JD1-203-010		FRAME,POWER
21	8A-JD1-202-110		FRAME,TV
22	8Z-JE7-610-010		HV-CABLE, 2P ZJE-7FOC-SCR
23	8Z-JE7-609-010		ANODE-CAP,ZJE-7
24	8A-JD1-005-010		PANEL,REAR 2
25	8A-JD1-017-010		CABI,REAR U
⚠ 26	8A-JE7-607-010		CRT,A51LTH196X-YOKE FLAT
27	83-JT1-217-010		SPR-E,EARTH
28	8A-JE7-620-010		CONN ASSY,2P VM-NK
29	8A-JD1-664-010		FF-CABLE,5P 1.0 400MM 30V
30	8A-JD1-661-110		CONN ASSY,12P V JOINT TO UNIT
31	8A-JD1-665-110		CONN ASSY,3P V UNIT TO OPT
32	8A-JD1-210-010		FRAME,MECH L
33	8A-JD1-004-010		PANEL,REAR 1
34	8A-JD1-209-010		FRAME,MECH BK
35	8A-JD1-204-010		HLDR,PWB

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
36	8A-JD1-211-010		FRAME,MECH R
37	8A-JD1-207-010		HLDR,MECH R
38	8A-JD1-666-010		FF-CABLE,11P 1.0 400MM 30V
39	8A-JD1-667-010		FF-CABLE,13P 1.0 400MM 30V
40	8A-JD1-003-010		PANEL,TRAY
41	8A-JD1-206-010		HLDR,MECH L
42	8Z-HU1-033-010		BADGE,DVD
43	8Z-JE7-607-110		CONN ASSY,1P CRT GND
⚠ 44	86-LBN-625-010		COTL,DGC21 6LB-22
45	87-A91-981-010		F-BEAD,18.8/1.1/7 HF7OSH
46	8A-JD1-226-010		PLATE,FRAME BK
47	87-A90-332-010		HLDR,SF-2001 HV CABLE
A	87-067-680-010		BVI T3+3-10
B	8Z-AV1-215-010		S-SCREW,IT3B+3-8 ZN
C	87-078-070-010		BVIT3B+4-12
D	87-067-689-010		BVTT+3-8
E	87-067-690-010		TAPPING SCREW, BVIT3+3-12
F	87-761-096-410		VFT2+3-10 W/O SLOT
G	8Z-JS1-210-010		BVT2+4-20
H	87-067-844-010		BVT2+4-16 BLK
I	87-067-703-010		TAPPING SCREW, BVT2+3-10
J	87-067-641-010		UTT2+3-8(W/O SLOT)BL
K	87-067-688-010		BVTT+3-6
L	87-067-579-010		TAPPING SCREW, BVT2+3-8
M	87-067-619-010		BVT1+3-12
N	87-067-758-010		BVT2+3-12 W/O SLOT
O	8Z-JBS-205-010		W-G,10-20-2

COLOR NAME TABLE

Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
B	Black	C	Cream	D	Orange
G	Green	H	Gray	L	Blue
LT	Transparent Blue	N	Gold	P	Pink
R	Red	S	Silver	ST	Titan Silver
T	Brown	V	Violet	W	White
WT	Transparent White	Y	Yellow	YT	Transparent Yellow
LM	Metallic Blue	LL	Light Blue	GT	Transparent Green
LD	Dark Blue	DT	Transparent Orange	GM	Metallic Green
YM	Metallic Yellow	DM	Metallic Orange	PT	Transparent Pink
LA	Aqua Blue				

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